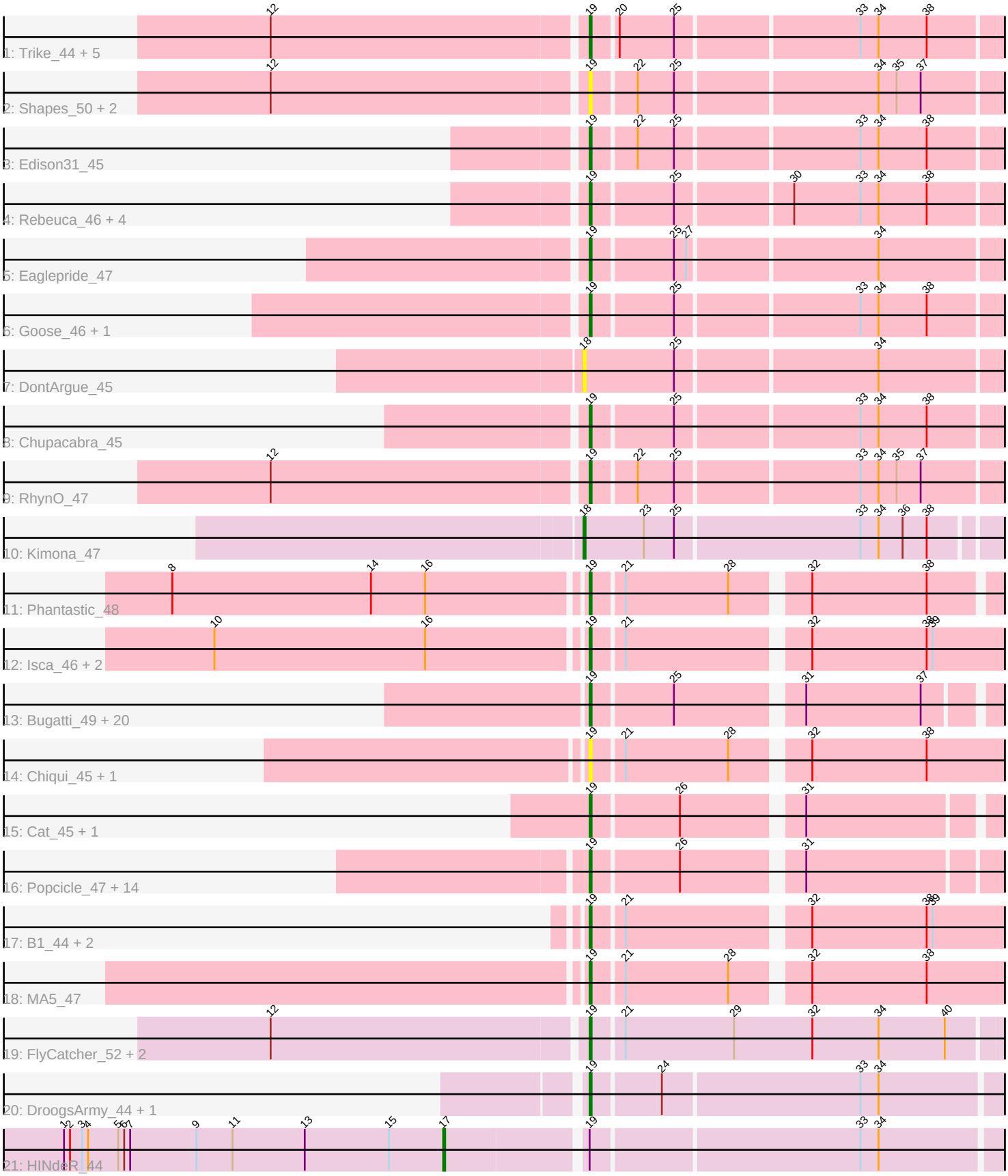
Pham 347547


1: Trike_44 + 5
2: Shapes_50 + 2
3: Edison31_45
4: Rebeuca_46 + 4
5: Eaglepride_47
6: Goose_46 + 1
7: DontArgue_45
8: Chupacabra_45
9: RhynO_47
10: Kimona_47
11: Phantastic_48
12: Isca_46 + 2
13: Bugatti_49 + 20
14: Chiqui_45 + 1
15: Cat_45 + 1
16: Popcicle_47 + 14
17: B1_44 + 2
18: MA5_47
19: FlyCatcher_52 + 2
20: DroogsArmy_44 + 1
21: HINdeR_44

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 347547 Report

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

Pham number 347547 has 76 members, 17 are drafts.

Phages represented in each track:
• Track 1 : Trike_44, KittenMittens_43, Drake94_44, PeaceMeal1_44, Severus_44, Poompha_45
• Track 2 : Shapes_50, Rowdy_50, DustyMartin_50
• Track 3 : Edison31_45
• Track 4 : Rebeuca_46, Twister_44, Topanga_44, WalterMcMickey_44, Kristoff_46
• Track 5 : Eaglepride_47
• Track 6 : Goose_46, OKCentral2016_45
• Track 7 : DontArgue_45
• Track 8 : Chupacabra_45
• Track 9 : RhynO_47
• Track 10 : Kimona_47
• Track 11 : Phantastic_48
• Track 12 : Isca_46, Rockstar_47, MK4_47
• Track 13 : Bugatti_49, SaturnRing_48, Scout_47, DropBear_47, BlueBird_49, Shep_47, Puppy_49, Kachowdy_47, HelDan_47, Marchesa_47, TNguyen7_48, Heathen_47, Goose1X_47, Roimos_47, Idleandcovert_48, Giroux_49, Zarafa_47, Fred313_47, Clammy_49, Pistachio_49, Goose1D_41
• Track 14 : Chiqui_45, BabyJohn_45
• Track 15 : Cat_45, BabyRay_47
• Track 16 : Popcicle_47, Margo_47, Hookmount_47, Caviar_47, Veracruz_46, QuinnKiro_46, Pocahontas_47, Todacoro_47, Lambert1_47, Texage_46, Norbert_46, ResDef_47, EtoileNova_48, Panamaxus_45, Noella_47
• Track 17 : B1_44, JF2_47, JF4_47
• Track 18 : MA5_47
• Track 19 : FlyCatcher_52, Sheen_48, Toro_50
• Track 20 : DroogsArmy_44, Timshel_46
• Track 21 : HINdeR_44

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

The start number called the most often in the published annotations is 19, it was called in 57 of the 59 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

• B1_44, BabyJohn_45, BabyRay_47, BlueBird_49, Bugatti_49, Cat_45, Caviar_47, Chiqui_45, Chupacabra_45, Clammy_49, Drake94_44, DroogsArmy_44, DropBear_47, DustyMartin_50, Eaglepride_47, Edison31_45, EtoileNova_48, FlyCatcher_52, Fred313_47, Giroux_49, Goose1D_41, Goose1X_47, Goose_46, Heathen_47, HelDan_47, Hookmount_47, Idleandcovert_48, Isca_46, JF2_47, JF4_47, Kachowdy_47, KittenMittens_43, Kristoff_46, Lambert1_47, MA5_47, MK4_47, Marchesa_47, Margo_47, Noella_47, Norbert_46, OKCentral2016_45, Panamaxus_45, PeaceMeal1_44, Phantastic_48, Pistachio_49, Pocahontas_47, Poompha_45, Popcicle_47, Puppy_49, QuinnKiro_46, Rebeuca_46, ResDef_47, RhynO_47, Rockstar_47, Roimos_47, Rowdy_50, SaturnRing_48, Scout_47, Severus_44, Shapes_50, Sheen_48, Shep_47, TNguyen7_48, Texage_46, Timshel_46, Todacoro_47, Topanga_44, Toro_50, Trike_44, Twister_44, Veracruz_46, WalterMcMickey_44, Zarafa_47,

Genes that have the "Most Annotated" start but do not call it:
• HINdeR_44,

Genes that do not have the "Most Annotated" start:
• DontArgue_45, Kimona_47,

Summary by start number:

Start 17:
• Found in 1 of 76 (1.3%) of genes in pham
• Manual Annotations of this start: 1 of 59
• Called 100.0% of time when present
• Phage (with cluster) where this start called: HINdeR_44 (A7),

Start 18:
• Found in 2 of 76 (2.6%) of genes in pham
• Manual Annotations of this start: 1 of 59
• Called 100.0% of time when present
• Phage (with cluster) where this start called: DontArgue_45 (A10), Kimona_47 (A19),

Start 19:
• Found in 74 of 76 (97.4%) of genes in pham
• Manual Annotations of this start: 57 of 59
• Called 98.6% of time when present
• Phage (with cluster) where this start called: B1_44 (A3), BabyJohn_45 (A3), BabyRay_47 (A3), BlueBird_49 (A3), Bugatti_49 (A3), Cat_45 (A3), Caviar_47 (A3), Chiqui_45 (A3), Chupacabra_45 (A10), Clammy_49 (A3), Drake94_44 (A10), DroogsArmy_44 (A7), DropBear_47 (A3), DustyMartin_50 (A10), Eaglepride_47 (A10), Edison31_45 (A10), EtoileNova_48 (A3), FlyCatcher_52 (A7), Fred313_47 (A3), Giroux_49 (A3), Goose1D_41 (A3), Goose1X_47 (A3), Goose_46 (A10), Heathen_47 (A3), HelDan_47 (A3), Hookmount_47 (A3), Idleandcovert_48 (A3), Isca_46 (A3), JF2_47 (A3), JF4_47 (A3), Kachowdy_47 (A3), KittenMittens_43 (A10), Kristoff_46 (A10), Lambert1_47 (A3), MA5_47 (A3), MK4_47 (A3), Marchesa_47 (A3), Margo_47 (A3), Noella_47 (A3), Norbert_46 (A3), OKCentral2016_45 (A10), Panamaxus_45 (A3), PeaceMeal1_44 (A10), Phantastic_48 (A3), Pistachio_49 (A3), Pocahontas_47 (A3), Poompha_45 (A10), Popcicle_47 (A3), Puppy_49 (A3), QuinnKiro_46 (A3), Rebeuca_46 (A10), ResDef_47 (A3), RhynO_47 (A10), Rockstar_47 (A3), Roimos_47 (A3), Rowdy_50 (A10), SaturnRing_48 (A3), Scout_47 (A3), Severus_44 (A10), Shapes_50 (A10), Sheen_48 (A7), Shep_47 (A3),

TNguyen7_48 (A3), Texage_46 (A3), Timshel_46 (A7), Todacoro_47 (A3), Topanga_44 (A10), Toro_50 (A7), Trike_44 (A10), Twister_44 (A10), Veracruz_46 (A3), WalterMcMickey_44 (A10), Zarafa_47 (A3),

Summary by clusters:

There are 4 clusters represented in this pham: A3, A19, A10, A7,

Info for manual annotations of cluster A10:
•Start number 19 was manually annotated 17 times for cluster A10.

Info for manual annotations of cluster A19:
•Start number 18 was manually annotated 1 time for cluster A19.

Info for manual annotations of cluster A3:
•Start number 19 was manually annotated 37 times for cluster A3.

Info for manual annotations of cluster A7:
•Start number 17 was manually annotated 1 time for cluster A7.
•Start number 19 was manually annotated 3 times for cluster A7.

Gene Information:

Gene: B1_44 Start: 31212, Stop: 31006, Start Num: 19
Candidate Starts for B1_44:
(Start: 19 @31212 has 57 MA's), (21, 31197), (32, 31113), (38, 31056), (39, 31053),

Gene: BabyJohn_45 Start: 32004, Stop: 31798, Start Num: 19
Candidate Starts for BabyJohn_45:
(Start: 19 @32004 has 57 MA's), (21, 31989), (28, 31938), (32, 31905), (38, 31848),

Gene: BabyRay_47 Start: 31939, Stop: 31742, Start Num: 19
Candidate Starts for BabyRay_47:
(Start: 19 @31939 has 57 MA's), (26, 31897), (31, 31843),

Gene: BlueBird_49 Start: 32028, Stop: 31831, Start Num: 19
Candidate Starts for BlueBird_49:
(Start: 19 @32028 has 57 MA's), (25, 31989), (31, 31932), (37, 31875),

Gene: Bugatti_49 Start: 32028, Stop: 31831, Start Num: 19
Candidate Starts for Bugatti_49:
(Start: 19 @32028 has 57 MA's), (25, 31989), (31, 31932), (37, 31875),

Gene: Cat_45 Start: 31552, Stop: 31355, Start Num: 19
Candidate Starts for Cat_45:
(Start: 19 @31552 has 57 MA's), (26, 31510), (31, 31456),

Gene: Caviar_47 Start: 32274, Stop: 32074, Start Num: 19
Candidate Starts for Caviar_47:
(Start: 19 @32274 has 57 MA's), (26, 32232), (31, 32178),

Gene: Chiqui_45 Start: 32013, Stop: 31807, Start Num: 19
Candidate Starts for Chiqui_45:
(Start: 19 @32013 has 57 MA's), (21, 31998), (28, 31947), (32, 31914), (38, 31857),

Gene: Chupacabra_45 Start: 31666, Stop: 31460, Start Num: 19
Candidate Starts for Chupacabra_45:
(Start: 19 @31666 has 57 MA's), (25, 31627), (33, 31540), (34, 31531), (38, 31507),

Gene: Clammy_49 Start: 32028, Stop: 31831, Start Num: 19
Candidate Starts for Clammy_49:
(Start: 19 @32028 has 57 MA's), (25, 31989), (31, 31932), (37, 31875),

Gene: DontArgue_45 Start: 30902, Stop: 30693, Start Num: 18
Candidate Starts for DontArgue_45:
(Start: 18 @30902 has 1 MA's), (25, 30857), (34, 30761),

Gene: Drake94_44 Start: 30942, Stop: 30736, Start Num: 19
Candidate Starts for Drake94_44:
(12, 31095), (Start: 19 @30942 has 57 MA's), (20, 30930), (25, 30903), (33, 30816), (34, 30807), (38, 30783),

Gene: DroogsArmy_44 Start: 33755, Stop: 33543, Start Num: 19
Candidate Starts for DroogsArmy_44:
(Start: 19 @33755 has 57 MA's), (24, 33722), (33, 33626), (34, 33617),

Gene: DropBear_47 Start: 31916, Stop: 31719, Start Num: 19
Candidate Starts for DropBear_47:
(Start: 19 @31916 has 57 MA's), (25, 31877), (31, 31820), (37, 31763),

Gene: DustyMartin_50 Start: 31746, Stop: 31540, Start Num: 19
Candidate Starts for DustyMartin_50:
(12, 31899), (Start: 19 @31746 has 57 MA's), (22, 31725), (25, 31707), (34, 31611), (35, 31602), (37, 31590),

Gene: Eaglepride_47 Start: 31736, Stop: 31527, Start Num: 19
Candidate Starts for Eaglepride_47:
(Start: 19 @31736 has 57 MA's), (25, 31697), (27, 31691), (34, 31601),

Gene: Edison31_45 Start: 31686, Stop: 31480, Start Num: 19
Candidate Starts for Edison31_45:
(Start: 19 @31686 has 57 MA's), (22, 31665), (25, 31647), (33, 31560), (34, 31551), (38, 31527),

Gene: EtoileNova_48 Start: 32278, Stop: 32078, Start Num: 19
Candidate Starts for EtoileNova_48:
(Start: 19 @32278 has 57 MA's), (26, 32236), (31, 32182),

Gene: FlyCatcher_52 Start: 34416, Stop: 34204, Start Num: 19
Candidate Starts for FlyCatcher_52:
(12, 34569), (Start: 19 @34416 has 57 MA's), (21, 34401), (29, 34347), (32, 34308), (34, 34275), (40, 34242),

Gene: Fred313_47 Start: 31601, Stop: 31404, Start Num: 19
Candidate Starts for Fred313_47:

(Start: 19 @31601 has 57 MA's), (25, 31562), (31, 31505), (37, 31448),

Gene: Giroux_49 Start: 32027, Stop: 31830, Start Num: 19
Candidate Starts for Giroux_49:
(Start: 19 @32027 has 57 MA's), (25, 31988), (31, 31931), (37, 31874),

Gene: Goose_46 Start: 31470, Stop: 31264, Start Num: 19
Candidate Starts for Goose_46:
(Start: 19 @31470 has 57 MA's), (25, 31431), (33, 31344), (34, 31335), (38, 31311),

Gene: Goose1D_41 Start: 28049, Stop: 27852, Start Num: 19
Candidate Starts for Goose1D_41:
(Start: 19 @28049 has 57 MA's), (25, 28010), (31, 27953), (37, 27896),

Gene: Goose1X_47 Start: 31191, Stop: 30994, Start Num: 19
Candidate Starts for Goose1X_47:
(Start: 19 @31191 has 57 MA's), (25, 31152), (31, 31095), (37, 31038),

Gene: HINdeR_44 Start: 33644, Stop: 33369, Start Num: 17
Candidate Starts for HINdeR_44:
(1, 33833), (2, 33830), (3, 33824), (4, 33821), (5, 33806), (6, 33803), (7, 33800), (9, 33767), (11, 33749), (13, 33713), (15, 33671), (Start: 17 @33644 has 1 MA's), (Start: 19 @33578 has 57 MA's), (33, 33449), (34, 33440),

Gene: Heathen_47 Start: 31657, Stop: 31460, Start Num: 19
Candidate Starts for Heathen_47:
(Start: 19 @31657 has 57 MA's), (25, 31618), (31, 31561), (37, 31504),

Gene: HelDan_47 Start: 31909, Stop: 31712, Start Num: 19
Candidate Starts for HelDan_47:
(Start: 19 @31909 has 57 MA's), (25, 31870), (31, 31813), (37, 31756),

Gene: Hookmount_47 Start: 32275, Stop: 32075, Start Num: 19
Candidate Starts for Hookmount_47:
(Start: 19 @32275 has 57 MA's), (26, 32233), (31, 32179),

Gene: Idleandcovert_48 Start: 32028, Stop: 31831, Start Num: 19
Candidate Starts for Idleandcovert_48:
(Start: 19 @32028 has 57 MA's), (25, 31989), (31, 31932), (37, 31875),

Gene: Isca_46 Start: 31461, Stop: 31255, Start Num: 19
Candidate Starts for Isca_46:
(10, 31641), (16, 31536), (Start: 19 @31461 has 57 MA's), (21, 31446), (32, 31362), (38, 31305), (39, 31302),

Gene: JF2_47 Start: 31212, Stop: 31006, Start Num: 19
Candidate Starts for JF2_47:
(Start: 19 @31212 has 57 MA's), (21, 31197), (32, 31113), (38, 31056), (39, 31053),

Gene: JF4_47 Start: 31212, Stop: 31006, Start Num: 19
Candidate Starts for JF4_47:
(Start: 19 @31212 has 57 MA's), (21, 31197), (32, 31113), (38, 31056), (39, 31053),

Gene: Kachowdy_47 Start: 31909, Stop: 31712, Start Num: 19
Candidate Starts for Kachowdy_47:
(Start: 19 @31909 has 57 MA's), (25, 31870), (31, 31813), (37, 31756),

Gene: Kimona_47 Start: 30659, Stop: 30456, Start Num: 18
Candidate Starts for Kimona_47:
(Start: 18 @30659 has 1 MA's), (23, 30629), (25, 30614), (33, 30524), (34, 30515), (36, 30503), (38, 30491),

Gene: KittenMittens_43 Start: 30950, Stop: 30744, Start Num: 19
Candidate Starts for KittenMittens_43:
(12, 31103), (Start: 19 @30950 has 57 MA's), (20, 30938), (25, 30911), (33, 30824), (34, 30815), (38, 30791),

Gene: Kristoff_46 Start: 32038, Stop: 31832, Start Num: 19
Candidate Starts for Kristoff_46:
(Start: 19 @32038 has 57 MA's), (25, 31999), (30, 31945), (33, 31912), (34, 31903), (38, 31879),

Gene: Lambert1_47 Start: 32274, Stop: 32074, Start Num: 19
Candidate Starts for Lambert1_47:
(Start: 19 @32274 has 57 MA's), (26, 32232), (31, 32178),

Gene: MA5_47 Start: 31363, Stop: 31157, Start Num: 19
Candidate Starts for MA5_47:
(Start: 19 @31363 has 57 MA's), (21, 31348), (28, 31297), (32, 31264), (38, 31207),

Gene: MK4_47 Start: 31446, Stop: 31240, Start Num: 19
Candidate Starts for MK4_47:
(10, 31626), (16, 31521), (Start: 19 @31446 has 57 MA's), (21, 31431), (32, 31347), (38, 31290), (39, 31287),

Gene: Marchesa_47 Start: 31907, Stop: 31710, Start Num: 19
Candidate Starts for Marchesa_47:
(Start: 19 @31907 has 57 MA's), (25, 31868), (31, 31811), (37, 31754),

Gene: Margo_47 Start: 32300, Stop: 32100, Start Num: 19
Candidate Starts for Margo_47:
(Start: 19 @32300 has 57 MA's), (26, 32258), (31, 32204),

Gene: Noella_47 Start: 32275, Stop: 32075, Start Num: 19
Candidate Starts for Noella_47:
(Start: 19 @32275 has 57 MA's), (26, 32233), (31, 32179),

Gene: Norbert_46 Start: 32274, Stop: 32074, Start Num: 19
Candidate Starts for Norbert_46:
(Start: 19 @32274 has 57 MA's), (26, 32232), (31, 32178),

Gene: OKCentral2016_45 Start: 31373, Stop: 31167, Start Num: 19
Candidate Starts for OKCentral2016_45:
(Start: 19 @31373 has 57 MA's), (25, 31334), (33, 31247), (34, 31238), (38, 31214),

Gene: Panamaxus_45 Start: 32274, Stop: 32074, Start Num: 19
Candidate Starts for Panamaxus_45:

(Start: 19 @32274 has 57 MA's), (26, 32232), (31, 32178),

Gene: PeaceMeal1_44 Start: 30951, Stop: 30745, Start Num: 19
Candidate Starts for PeaceMeal1_44:
(12, 31104), (Start: 19 @30951 has 57 MA's), (20, 30939), (25, 30912), (33, 30825), (34, 30816), (38, 30792),

Gene: Phantastic_48 Start: 31650, Stop: 31450, Start Num: 19
Candidate Starts for Phantastic_48:
(8, 31851), (14, 31752), (16, 31725), (Start: 19 @31650 has 57 MA's), (21, 31635), (28, 31584), (32, 31551), (38, 31494),

Gene: Pistachio_49 Start: 31575, Stop: 31378, Start Num: 19
Candidate Starts for Pistachio_49:
(Start: 19 @31575 has 57 MA's), (25, 31536), (31, 31479), (37, 31422),

Gene: Pocahontas_47 Start: 32271, Stop: 32071, Start Num: 19
Candidate Starts for Pocahontas_47:
(Start: 19 @32271 has 57 MA's), (26, 32229), (31, 32175),

Gene: Poompha_45 Start: 30949, Stop: 30743, Start Num: 19
Candidate Starts for Poompha_45:
(12, 31102), (Start: 19 @30949 has 57 MA's), (20, 30937), (25, 30910), (33, 30823), (34, 30814), (38, 30790),

Gene: Popcicle_47 Start: 32271, Stop: 32071, Start Num: 19
Candidate Starts for Popcicle_47:
(Start: 19 @32271 has 57 MA's), (26, 32229), (31, 32175),

Gene: Puppy_49 Start: 31648, Stop: 31451, Start Num: 19
Candidate Starts for Puppy_49:
(Start: 19 @31648 has 57 MA's), (25, 31609), (31, 31552), (37, 31495),

Gene: QuinnKiro_46 Start: 32274, Stop: 32074, Start Num: 19
Candidate Starts for QuinnKiro_46:
(Start: 19 @32274 has 57 MA's), (26, 32232), (31, 32178),

Gene: Rebeuca_46 Start: 32039, Stop: 31833, Start Num: 19
Candidate Starts for Rebeuca_46:
(Start: 19 @32039 has 57 MA's), (25, 32000), (30, 31946), (33, 31913), (34, 31904), (38, 31880),

Gene: ResDef_47 Start: 32274, Stop: 32074, Start Num: 19
Candidate Starts for ResDef_47:
(Start: 19 @32274 has 57 MA's), (26, 32232), (31, 32178),

Gene: RhynO_47 Start: 31838, Stop: 31632, Start Num: 19
Candidate Starts for RhynO_47:
(12, 31991), (Start: 19 @31838 has 57 MA's), (22, 31817), (25, 31799), (33, 31712), (34, 31703), (35, 31694), (37, 31682),

Gene: Rockstar_47 Start: 31455, Stop: 31249, Start Num: 19
Candidate Starts for Rockstar_47:

(10, 31635), (16, 31530), (Start: 19 @31455 has 57 MA's), (21, 31440), (32, 31356), (38, 31299), (39, 31296),

Gene: Roimos_47 Start: 31825, Stop: 31628, Start Num: 19
Candidate Starts for Roimos_47:
(Start: 19 @31825 has 57 MA's), (25, 31786), (31, 31729), (37, 31672),

Gene: Rowdy_50 Start: 31746, Stop: 31540, Start Num: 19
Candidate Starts for Rowdy_50:
(12, 31899), (Start: 19 @31746 has 57 MA's), (22, 31725), (25, 31707), (34, 31611), (35, 31602), (37, 31590),

Gene: SaturnRing_48 Start: 32028, Stop: 31831, Start Num: 19
Candidate Starts for SaturnRing_48:
(Start: 19 @32028 has 57 MA's), (25, 31989), (31, 31932), (37, 31875),

Gene: Scout_47 Start: 31156, Stop: 30959, Start Num: 19
Candidate Starts for Scout_47:
(Start: 19 @31156 has 57 MA's), (25, 31117), (31, 31060), (37, 31003),

Gene: Severus_44 Start: 30949, Stop: 30743, Start Num: 19
Candidate Starts for Severus_44:
(12, 31102), (Start: 19 @30949 has 57 MA's), (20, 30937), (25, 30910), (33, 30823), (34, 30814), (38, 30790),

Gene: Shapes_50 Start: 31746, Stop: 31540, Start Num: 19
Candidate Starts for Shapes_50:
(12, 31899), (Start: 19 @31746 has 57 MA's), (22, 31725), (25, 31707), (34, 31611), (35, 31602), (37, 31590),

Gene: Sheen_48 Start: 34305, Stop: 34093, Start Num: 19
Candidate Starts for Sheen_48:
(12, 34458), (Start: 19 @34305 has 57 MA's), (21, 34290), (29, 34236), (32, 34197), (34, 34164), (40, 34131),

Gene: Shep_47 Start: 30870, Stop: 30673, Start Num: 19
Candidate Starts for Shep_47:
(Start: 19 @30870 has 57 MA's), (25, 30831), (31, 30774), (37, 30717),

Gene: TNguyen7_48 Start: 31995, Stop: 31798, Start Num: 19
Candidate Starts for TNguyen7_48:
(Start: 19 @31995 has 57 MA's), (25, 31956), (31, 31899), (37, 31842),

Gene: Texage_46 Start: 32275, Stop: 32075, Start Num: 19
Candidate Starts for Texage_46:
(Start: 19 @32275 has 57 MA's), (26, 32233), (31, 32179),

Gene: Timshel_46 Start: 34012, Stop: 33800, Start Num: 19
Candidate Starts for Timshel_46:
(Start: 19 @34012 has 57 MA's), (24, 33979), (33, 33883), (34, 33874),

Gene: Todacoro_47 Start: 32274, Stop: 32074, Start Num: 19
Candidate Starts for Todacoro_47:

(Start: 19 @32274 has 57 MA's), (26, 32232), (31, 32178),

Gene: Topanga_44 Start: 31688, Stop: 31482, Start Num: 19
Candidate Starts for Topanga_44:
(Start: 19 @31688 has 57 MA's), (25, 31649), (30, 31595), (33, 31562), (34, 31553), (38, 31529),

Gene: Toro_50 Start: 34416, Stop: 34204, Start Num: 19
Candidate Starts for Toro_50:
(12, 34569), (Start: 19 @34416 has 57 MA's), (21, 34401), (29, 34347), (32, 34308), (34, 34275), (40, 34242),

Gene: Trike_44 Start: 30957, Stop: 30751, Start Num: 19
Candidate Starts for Trike_44:
(12, 31110), (Start: 19 @30957 has 57 MA's), (20, 30945), (25, 30918), (33, 30831), (34, 30822), (38, 30798),

Gene: Twister_44 Start: 31599, Stop: 31393, Start Num: 19
Candidate Starts for Twister_44:
(Start: 19 @31599 has 57 MA's), (25, 31560), (30, 31506), (33, 31473), (34, 31464), (38, 31440),

Gene: Veracruz_46 Start: 32274, Stop: 32074, Start Num: 19
Candidate Starts for Veracruz_46:
(Start: 19 @32274 has 57 MA's), (26, 32232), (31, 32178),

Gene: WalterMcMickey_44 Start: 31599, Stop: 31393, Start Num: 19
Candidate Starts for WalterMcMickey_44:
(Start: 19 @31599 has 57 MA's), (25, 31560), (30, 31506), (33, 31473), (34, 31464), (38, 31440),

Gene: Zarafa_47 Start: 31918, Stop: 31721, Start Num: 19
Candidate Starts for Zarafa_47:
(Start: 19 @31918 has 57 MA's), (25, 31879), (31, 31822), (37, 31765),