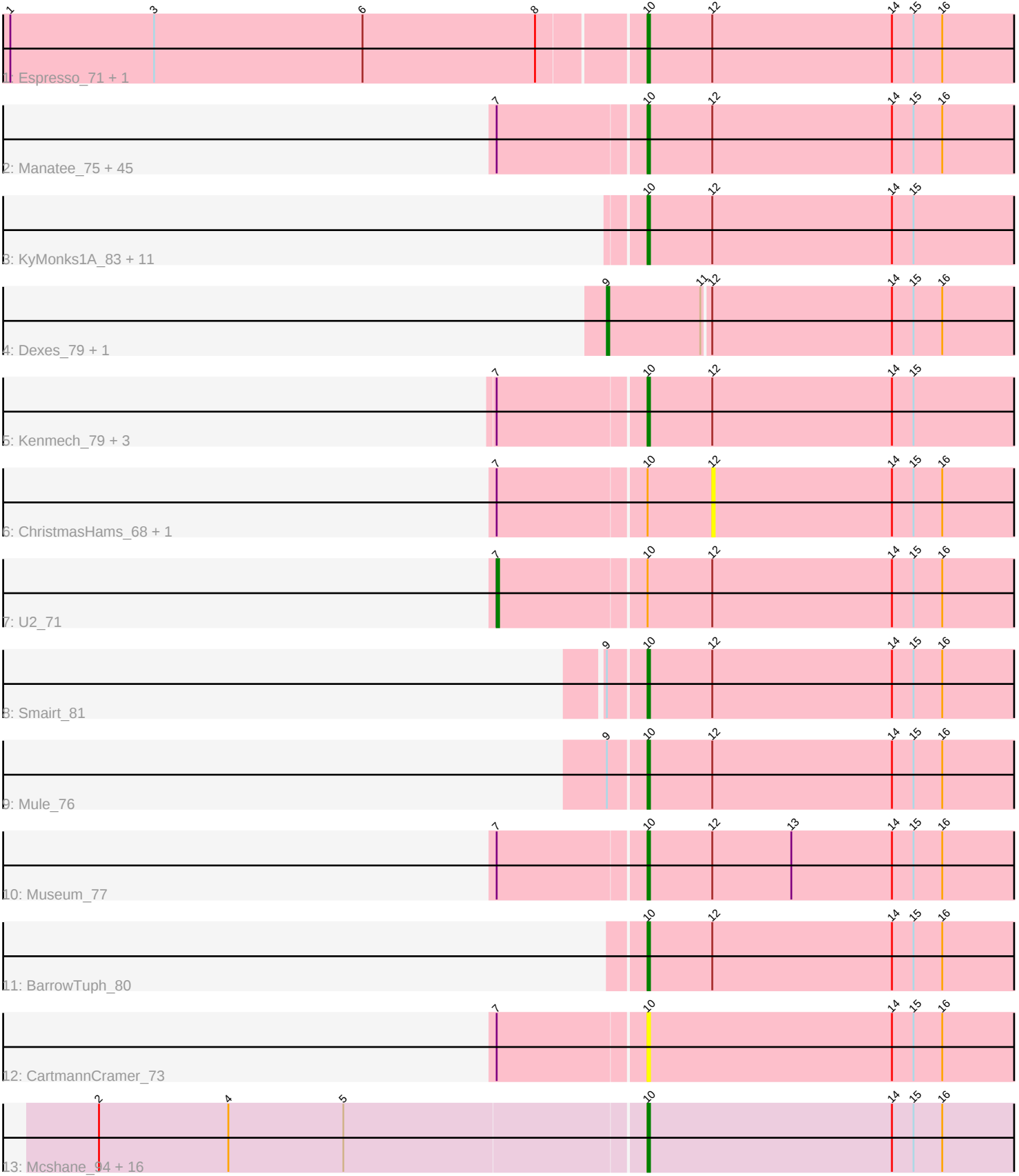


Pham 271582



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 271582 Report

This analysis was run 02/07/26 on database version 634.

Pham number 271582 has 91 members, 9 are drafts.

Phages represented in each track:

- Track 1 : Espresso_71, Gandalf20_76
- Track 2 : Manatee_75, PattyP_77, Kanely_80, Makemake_80, Tote_73, Dulcie_78, Altman_81, BPBiebs31_82, MetalQZJ_74, Sibs6_77, PSullivan_75, Licorice_79, Sorpresa_76, HarryOW_78, Swole_78, AFIS_74, Burton_78, GrecoEtereo_81, Moose_79, Perseus_77, Zeeculate_73, Euphoria_78, PascalRango_75, BluSpix_75, ConceptII_83, SwissCheese_81, Corvo_79, Pari_82, SpikeBT_74, Pita2_78, Tasp14_76, IgnatiusPatJac_77, MaryBeth_75, Lopton_76, Parliament_78, Gwendoluna_81, Bethlehem_80, Sandaddy_75, MPlant7149_77, Forsytheast_79, Aeneas_82, KBG_75, BaconJack_79, JuliaChild_78, EnzoK_78, Watermelon_80
- Track 3 : KyMonks1A_83, Niza_77, Levia_71, Puppet_72, NEHalo_73, Lesedi_74, STLscum_83, Eyeball_76, Molly_77, Mryolo_72, PhineBark_73, Ohno789_80
- Track 4 : Dexes_79, Paphu_72
- Track 5 : Kenmech_79, Arlo_77, Abbyshoes_77, Dussy_76
- Track 6 : ChristmasHams_68, StewieG_73
- Track 7 : U2_71
- Track 8 : Smairt_81
- Track 9 : Mule_76
- Track 10 : Museum_77
- Track 11 : BarrowTuph_80
- Track 12 : CartmannCramer_73
- Track 13 : Mcshane_94, FleetyMac_96, True_93, Olak_94, Selr12_96, Slatt_94, Orwigg_93, DirtJuice_93, Burr_94, Scrick_93, Cornbread_92, BoogieWoogie_93, Megamind20_94, Andre_96, Charles1_95, Pacifista_94, FremontTroll_92

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

The start number called the most often in the published annotations is 10, it was called in 79 of the 82 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AFIS_74, Abbyshoes_77, Aeneas_82, Altman_81, Andre_96, Arlo_77, BPBiebs31_82, BaconJack_79, BarrowTuph_80, Bethlehem_80, BluSpix_75, BoogieWoogie_93, Burr_94, Burton_78, CartmannCramer_73, Charles1_95, ConceptII_83, Cornbread_92, Corvo_79, DirtJuice_93, Dulcie_78, Dussy_76,

EnzoK_78, Espresso_71, Euphoria_78, Eyeball_76, FleetyMac_96, Forsytheast_79, FremontTroll_92, Gandalf20_76, GrecoEtereo_81, Gwendoluna_81, HarryOW_78, IgnatiusPatJac_77, JuliaChild_78, KBG_75, Kanely_80, Kenmech_79, KyMonks1A_83, Lesedi_74, Levias_71, Licorice_79, Lopton_76, MPlant7149_77, Makemake_80, Manatee_75, MaryBeth_75, Mcshane_94, Megamind20_94, MetalQZJ_74, Molly_77, Moose_79, Mryolo_72, Mule_76, Museum_77, NEHalo_73, Niza_77, Ohno789_80, Olak_94, Orwigg_93, PSullivan_75, Pacifista_94, Pari_82, Parliament_78, PascalRango_75, PattyP_77, Perseus_77, PhineBark_73, Pita2_78, Puppet_72, STLscum_83, Sandaddy_75, Scrick_93, Selr12_96, Sibs6_77, Slatt_94, Smairt_81, Sorpresa_76, SpikeBT_74, SwissCheese_81, Swole_78, Tasp14_76, Tote_73, True_93, Watermelon_80, Zeeculate_73,

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

- ChristmasHams_68, StewieG_73, U2_71,

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

- Dexes_79, Paphu_72,

Summary by start number:

Start 7:

- Found in 55 of 91 (60.4%) of genes in pham
- Manual Annotations of this start: 1 of 82
- Called 1.8% of time when present
- Phage (with cluster) where this start called: U2_71 (A1),

Start 9:

- Found in 4 of 91 (4.4%) of genes in pham
- Manual Annotations of this start: 2 of 82
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Dexes_79 (A1), Paphu_72 (A1),

Start 10:

- Found in 89 of 91 (97.8%) of genes in pham
- Manual Annotations of this start: 79 of 82
- Called 96.6% of time when present
- Phage (with cluster) where this start called: AFIS_74 (A1), Abbyshoes_77 (A1), Aeneas_82 (A1), Altman_81 (A1), Andre_96 (B1), Arlo_77 (A1), BPBiebs31_82 (A1), BaconJack_79 (A1), BarrowTuph_80 (A1), Bethlehem_80 (A1), BluSpix_75 (A1), BoogieWoogie_93 (B1), Burr_94 (B1), Burton_78 (A1), CartmannCramer_73 (A1), Charles1_95 (B1), ConceptII_83 (A1), Cornbread_92 (B1), Corvo_79 (A1), DirtJuice_93 (B1), Dulcie_78 (A1), Dussy_76 (A1), EnzoK_78 (A1), Espresso_71 (A1), Euphoria_78 (A1), Eyeball_76 (A1), FleetyMac_96 (B1), Forsytheast_79 (A1), FremontTroll_92 (B1), Gandalf20_76 (A1), GrecoEtereo_81 (A1), Gwendoluna_81 (A1), HarryOW_78 (A1), IgnatiusPatJac_77 (A1), JuliaChild_78 (A1), KBG_75 (A1), Kanely_80 (A1), Kenmech_79 (A1), KyMonks1A_83 (A1), Lesedi_74 (A1), Levias_71 (A1), Licorice_79 (A1), Lopton_76 (A1), MPlant7149_77 (A1), Makemake_80 (A1), Manatee_75 (A1), MaryBeth_75 (A1), Mcshane_94 (B1), Megamind20_94 (B1), MetalQZJ_74 (A1), Molly_77 (A1), Moose_79 (A1), Mryolo_72 (A1), Mule_76 (A1), Museum_77 (A1), NEHalo_73 (A1), Niza_77 (A1), Ohno789_80 (A1), Olak_94 (B1), Orwigg_93 (B1), PSullivan_75 (A1), Pacifista_94 (B1), Pari_82 (A1), Parliament_78 (A1), PascalRango_75 (A1), PattyP_77 (A1), Perseus_77 (A1), PhineBark_73 (A1), Pita2_78 (A1), Puppet_72 (A1), STLscum_83 (A1), Sandaddy_75 (A1), Scrick_93

(B1), Selr12_96 (B1), Sib5_77 (A1), Slatt_94 (B1), Smairt_81 (A1), Sorpresa_76 (A1), SpikeBT_74 (A1), SwissCheese_81 (A1), Swole_78 (A1), Tasp14_76 (A1), Tote_73 (A1), True_93 (B1), Watermelon_80 (A1), Zeeculate_73 (A1),

Start 12:

- Found in 73 of 91 (80.2%) of genes in pham
- No Manual Annotations of this start.
- Called 2.7% of time when present
- Phage (with cluster) where this start called: ChristmasHams_68 (A1), StewieG_73 (A1),

Summary by clusters:

There are 2 clusters represented in this pham: A1, B1,

Info for manual annotations of cluster A1:

- Start number 7 was manually annotated 1 time for cluster A1.
- Start number 9 was manually annotated 2 times for cluster A1.
- Start number 10 was manually annotated 66 times for cluster A1.

Info for manual annotations of cluster B1:

- Start number 10 was manually annotated 13 times for cluster B1.

Gene Information:

Gene: AFIS_74 Start: 47687, Stop: 47508, Start Num: 10

Candidate Starts for AFIS_74:

(Start: 7 @47747 has 1 MA's), (Start: 10 @47687 has 79 MA's), (12, 47660), (14, 47585), (15, 47576), (16, 47564),

Gene: Abbyshoes_77 Start: 46940, Stop: 46761, Start Num: 10

Candidate Starts for Abbyshoes_77:

(Start: 7 @47000 has 1 MA's), (Start: 10 @46940 has 79 MA's), (12, 46913), (14, 46838), (15, 46829),

Gene: Aeneas_82 Start: 49299, Stop: 49120, Start Num: 10

Candidate Starts for Aeneas_82:

(Start: 7 @49359 has 1 MA's), (Start: 10 @49299 has 79 MA's), (12, 49272), (14, 49197), (15, 49188), (16, 49176),

Gene: Altman_81 Start: 48326, Stop: 48147, Start Num: 10

Candidate Starts for Altman_81:

(Start: 7 @48386 has 1 MA's), (Start: 10 @48326 has 79 MA's), (12, 48299), (14, 48224), (15, 48215), (16, 48203),

Gene: Andre_96 Start: 65480, Stop: 65301, Start Num: 10

Candidate Starts for Andre_96:

(2, 65705), (4, 65651), (5, 65603), (Start: 10 @65480 has 79 MA's), (14, 65378), (15, 65369), (16, 65357),

Gene: Arlo_77 Start: 47734, Stop: 47555, Start Num: 10

Candidate Starts for Arlo_77:

(Start: 7 @47794 has 1 MA's), (Start: 10 @47734 has 79 MA's), (12, 47707), (14, 47632), (15, 47623),

Gene: BPBiebs31_82 Start: 48846, Stop: 48667, Start Num: 10

Candidate Starts for BPBiebs31_82:

(Start: 7 @48906 has 1 MA's), (Start: 10 @48846 has 79 MA's), (12, 48819), (14, 48744), (15, 48735), (16, 48723),

Gene: BaconJack_79 Start: 49001, Stop: 48822, Start Num: 10

Candidate Starts for BaconJack_79:

(Start: 7 @49061 has 1 MA's), (Start: 10 @49001 has 79 MA's), (12, 48974), (14, 48899), (15, 48890), (16, 48878),

Gene: BarrowTuph_80 Start: 48047, Stop: 47868, Start Num: 10

Candidate Starts for BarrowTuph_80:

(Start: 10 @48047 has 79 MA's), (12, 48020), (14, 47945), (15, 47936), (16, 47924),

Gene: Bethlehem_80 Start: 49886, Stop: 49707, Start Num: 10

Candidate Starts for Bethlehem_80:

(Start: 7 @49946 has 1 MA's), (Start: 10 @49886 has 79 MA's), (12, 49859), (14, 49784), (15, 49775), (16, 49763),

Gene: BluSpix_75 Start: 42535, Stop: 42356, Start Num: 10

Candidate Starts for BluSpix_75:

(Start: 7 @42595 has 1 MA's), (Start: 10 @42535 has 79 MA's), (12, 42508), (14, 42433), (15, 42424), (16, 42412),

Gene: BoogieWoogie_93 Start: 65043, Stop: 64864, Start Num: 10

Candidate Starts for BoogieWoogie_93:

(2, 65268), (4, 65214), (5, 65166), (Start: 10 @65043 has 79 MA's), (14, 64941), (15, 64932), (16, 64920),

Gene: Burr_94 Start: 65083, Stop: 64904, Start Num: 10

Candidate Starts for Burr_94:

(2, 65308), (4, 65254), (5, 65206), (Start: 10 @65083 has 79 MA's), (14, 64981), (15, 64972), (16, 64960),

Gene: Burton_78 Start: 49278, Stop: 49099, Start Num: 10

Candidate Starts for Burton_78:

(Start: 7 @49338 has 1 MA's), (Start: 10 @49278 has 79 MA's), (12, 49251), (14, 49176), (15, 49167), (16, 49155),

Gene: CartmannCramer_73 Start: 48022, Stop: 47843, Start Num: 10

Candidate Starts for CartmannCramer_73:

(Start: 7 @48082 has 1 MA's), (Start: 10 @48022 has 79 MA's), (14, 47920), (15, 47911), (16, 47899),

Gene: Charles1_95 Start: 65391, Stop: 65212, Start Num: 10

Candidate Starts for Charles1_95:

(2, 65616), (4, 65562), (5, 65514), (Start: 10 @65391 has 79 MA's), (14, 65289), (15, 65280), (16, 65268),

Gene: ChristmasHams_68 Start: 44004, Stop: 43852, Start Num: 12

Candidate Starts for ChristmasHams_68:

(Start: 7 @44091 has 1 MA's), (Start: 10 @44031 has 79 MA's), (12, 44004), (14, 43929), (15, 43920), (16, 43908),

Gene: ConceptII_83 Start: 49427, Stop: 49248, Start Num: 10

Candidate Starts for ConceptII_83:

(Start: 7 @49487 has 1 MA's), (Start: 10 @49427 has 79 MA's), (12, 49400), (14, 49325), (15, 49316), (16, 49304),

Gene: Cornbread_92 Start: 65265, Stop: 65086, Start Num: 10

Candidate Starts for Cornbread_92:

(2, 65490), (4, 65436), (5, 65388), (Start: 10 @65265 has 79 MA's), (14, 65163), (15, 65154), (16, 65142),

Gene: Corvo_79 Start: 48769, Stop: 48590, Start Num: 10

Candidate Starts for Corvo_79:

(Start: 7 @48829 has 1 MA's), (Start: 10 @48769 has 79 MA's), (12, 48742), (14, 48667), (15, 48658), (16, 48646),

Gene: Dexes_79 Start: 50024, Stop: 49830, Start Num: 9

Candidate Starts for Dexes_79:

(Start: 9 @50024 has 2 MA's), (11, 49985), (12, 49982), (14, 49907), (15, 49898), (16, 49886),

Gene: DirtJuice_93 Start: 65529, Stop: 65350, Start Num: 10

Candidate Starts for DirtJuice_93:

(2, 65754), (4, 65700), (5, 65652), (Start: 10 @65529 has 79 MA's), (14, 65427), (15, 65418), (16, 65406),

Gene: Dulcie_78 Start: 49375, Stop: 49196, Start Num: 10

Candidate Starts for Dulcie_78:

(Start: 7 @49435 has 1 MA's), (Start: 10 @49375 has 79 MA's), (12, 49348), (14, 49273), (15, 49264), (16, 49252),

Gene: Dussy_76 Start: 46960, Stop: 46781, Start Num: 10

Candidate Starts for Dussy_76:

(Start: 7 @47020 has 1 MA's), (Start: 10 @46960 has 79 MA's), (12, 46933), (14, 46858), (15, 46849),

Gene: EnzoK_78 Start: 45301, Stop: 45122, Start Num: 10

Candidate Starts for EnzoK_78:

(Start: 7 @45361 has 1 MA's), (Start: 10 @45301 has 79 MA's), (12, 45274), (14, 45199), (15, 45190), (16, 45178),

Gene: Espresso_71 Start: 45863, Stop: 45684, Start Num: 10

Candidate Starts for Espresso_71:

(1, 46124), (3, 46064), (6, 45977), (8, 45905), (Start: 10 @45863 has 79 MA's), (12, 45836), (14, 45761), (15, 45752), (16, 45740),

Gene: Euphoria_78 Start: 47780, Stop: 47601, Start Num: 10

Candidate Starts for Euphoria_78:

(Start: 7 @47840 has 1 MA's), (Start: 10 @47780 has 79 MA's), (12, 47753), (14, 47678), (15, 47669), (16, 47657),

Gene: Eyeball_76 Start: 47065, Stop: 46886, Start Num: 10

Candidate Starts for Eyeball_76:

(Start: 10 @47065 has 79 MA's), (12, 47038), (14, 46963), (15, 46954),

Gene: FleetyMac_96 Start: 65262, Stop: 65083, Start Num: 10

Candidate Starts for FleetyMac_96:

(2, 65487), (4, 65433), (5, 65385), (Start: 10 @65262 has 79 MA's), (14, 65160), (15, 65151), (16, 65139),

Gene: Forsytheast_79 Start: 47803, Stop: 47624, Start Num: 10

Candidate Starts for Forsytheast_79:

(Start: 7 @47863 has 1 MA's), (Start: 10 @47803 has 79 MA's), (12, 47776), (14, 47701), (15, 47692), (16, 47680),

Gene: FremontTroll_92 Start: 65688, Stop: 65509, Start Num: 10

Candidate Starts for FremontTroll_92:

(2, 65913), (4, 65859), (5, 65811), (Start: 10 @65688 has 79 MA's), (14, 65586), (15, 65577), (16, 65565),

Gene: Gandalf20_76 Start: 47148, Stop: 46969, Start Num: 10

Candidate Starts for Gandalf20_76:

(1, 47409), (3, 47349), (6, 47262), (8, 47190), (Start: 10 @47148 has 79 MA's), (12, 47121), (14, 47046), (15, 47037), (16, 47025),

Gene: GrecoEtereo_81 Start: 48777, Stop: 48598, Start Num: 10

Candidate Starts for GrecoEtereo_81:

(Start: 7 @48837 has 1 MA's), (Start: 10 @48777 has 79 MA's), (12, 48750), (14, 48675), (15, 48666), (16, 48654),

Gene: Gwendoluna_81 Start: 48614, Stop: 48435, Start Num: 10

Candidate Starts for Gwendoluna_81:

(Start: 7 @48674 has 1 MA's), (Start: 10 @48614 has 79 MA's), (12, 48587), (14, 48512), (15, 48503), (16, 48491),

Gene: HarryOW_78 Start: 48825, Stop: 48646, Start Num: 10

Candidate Starts for HarryOW_78:

(Start: 7 @48885 has 1 MA's), (Start: 10 @48825 has 79 MA's), (12, 48798), (14, 48723), (15, 48714), (16, 48702),

Gene: IgnatiusPatJac_77 Start: 46480, Stop: 46301, Start Num: 10

Candidate Starts for IgnatiusPatJac_77:

(Start: 7 @46540 has 1 MA's), (Start: 10 @46480 has 79 MA's), (12, 46453), (14, 46378), (15, 46369), (16, 46357),

Gene: JuliaChild_78 Start: 47708, Stop: 47529, Start Num: 10

Candidate Starts for JuliaChild_78:

(Start: 7 @47768 has 1 MA's), (Start: 10 @47708 has 79 MA's), (12, 47681), (14, 47606), (15, 47597), (16, 47585),

Gene: KBG_75 Start: 48363, Stop: 48184, Start Num: 10

Candidate Starts for KBG_75:

(Start: 7 @48423 has 1 MA's), (Start: 10 @48363 has 79 MA's), (12, 48336), (14, 48261), (15, 48252), (16, 48240),

Gene: Kanely_80 Start: 48103, Stop: 47924, Start Num: 10

Candidate Starts for Kanely_80:

(Start: 7 @48163 has 1 MA's), (Start: 10 @48103 has 79 MA's), (12, 48076), (14, 48001), (15, 47992), (16, 47980),

Gene: Kenmech_79 Start: 48086, Stop: 47907, Start Num: 10

Candidate Starts for Kenmech_79:

(Start: 7 @48146 has 1 MA's), (Start: 10 @48086 has 79 MA's), (12, 48059), (14, 47984), (15, 47975),

Gene: KyMonks1A_83 Start: 48417, Stop: 48238, Start Num: 10

Candidate Starts for KyMonks1A_83:

(Start: 10 @48417 has 79 MA's), (12, 48390), (14, 48315), (15, 48306),

Gene: Lesedi_74 Start: 45574, Stop: 45395, Start Num: 10

Candidate Starts for Lesedi_74:

(Start: 10 @45574 has 79 MA's), (12, 45547), (14, 45472), (15, 45463),

Gene: Levia_71 Start: 45112, Stop: 44933, Start Num: 10

Candidate Starts for Levia_71:

(Start: 10 @45112 has 79 MA's), (12, 45085), (14, 45010), (15, 45001),

Gene: Licorice_79 Start: 49404, Stop: 49225, Start Num: 10

Candidate Starts for Licorice_79:

(Start: 7 @49464 has 1 MA's), (Start: 10 @49404 has 79 MA's), (12, 49377), (14, 49302), (15, 49293), (16, 49281),

Gene: Lopton_76 Start: 48419, Stop: 48240, Start Num: 10

Candidate Starts for Lopton_76:

(Start: 7 @48479 has 1 MA's), (Start: 10 @48419 has 79 MA's), (12, 48392), (14, 48317), (15, 48308), (16, 48296),

Gene: MPlant7149_77 Start: 46973, Stop: 46794, Start Num: 10

Candidate Starts for MPlant7149_77:

(Start: 7 @47033 has 1 MA's), (Start: 10 @46973 has 79 MA's), (12, 46946), (14, 46871), (15, 46862), (16, 46850),

Gene: Makemake_80 Start: 48024, Stop: 47845, Start Num: 10

Candidate Starts for Makemake_80:

(Start: 7 @48084 has 1 MA's), (Start: 10 @48024 has 79 MA's), (12, 47997), (14, 47922), (15, 47913), (16, 47901),

Gene: Manatee_75 Start: 45954, Stop: 45775, Start Num: 10

Candidate Starts for Manatee_75:

(Start: 7 @46014 has 1 MA's), (Start: 10 @45954 has 79 MA's), (12, 45927), (14, 45852), (15, 45843), (16, 45831),

Gene: MaryBeth_75 Start: 47244, Stop: 47065, Start Num: 10

Candidate Starts for MaryBeth_75:

(Start: 7 @47304 has 1 MA's), (Start: 10 @47244 has 79 MA's), (12, 47217), (14, 47142), (15, 47133), (16, 47121),

Gene: Mcshane_94 Start: 65069, Stop: 64890, Start Num: 10

Candidate Starts for Mcshane_94:

(2, 65294), (4, 65240), (5, 65192), (Start: 10 @65069 has 79 MA's), (14, 64967), (15, 64958), (16, 64946),

Gene: Megamind20_94 Start: 65033, Stop: 64854, Start Num: 10

Candidate Starts for Megamind20_94:

(2, 65258), (4, 65204), (5, 65156), (Start: 10 @65033 has 79 MA's), (14, 64931), (15, 64922), (16, 64910),

Gene: MetalQZJ_74 Start: 47244, Stop: 47065, Start Num: 10

Candidate Starts for MetalQZJ_74:

(Start: 7 @47304 has 1 MA's), (Start: 10 @47244 has 79 MA's), (12, 47217), (14, 47142), (15, 47133), (16, 47121),

Gene: Molly_77 Start: 46630, Stop: 46451, Start Num: 10

Candidate Starts for Molly_77:

(Start: 10 @46630 has 79 MA's), (12, 46603), (14, 46528), (15, 46519),

Gene: Moose_79 Start: 47803, Stop: 47624, Start Num: 10

Candidate Starts for Moose_79:

(Start: 7 @47863 has 1 MA's), (Start: 10 @47803 has 79 MA's), (12, 47776), (14, 47701), (15, 47692), (16, 47680),

Gene: Mryolo_72 Start: 45588, Stop: 45409, Start Num: 10

Candidate Starts for Mryolo_72:

(Start: 10 @45588 has 79 MA's), (12, 45561), (14, 45486), (15, 45477),

Gene: Mule_76 Start: 46670, Stop: 46491, Start Num: 10

Candidate Starts for Mule_76:

(Start: 9 @46685 has 2 MA's), (Start: 10 @46670 has 79 MA's), (12, 46643), (14, 46568), (15, 46559), (16, 46547),

Gene: Museum_77 Start: 47693, Stop: 47514, Start Num: 10

Candidate Starts for Museum_77:

(Start: 7 @47753 has 1 MA's), (Start: 10 @47693 has 79 MA's), (12, 47666), (13, 47633), (14, 47591), (15, 47582), (16, 47570),

Gene: NEHalo_73 Start: 46503, Stop: 46324, Start Num: 10

Candidate Starts for NEHalo_73:

(Start: 10 @46503 has 79 MA's), (12, 46476), (14, 46401), (15, 46392),

Gene: Niza_77 Start: 47976, Stop: 47797, Start Num: 10

Candidate Starts for Niza_77:

(Start: 10 @47976 has 79 MA's), (12, 47949), (14, 47874), (15, 47865),

Gene: Ohno789_80 Start: 48726, Stop: 48547, Start Num: 10

Candidate Starts for Ohno789_80:

(Start: 10 @48726 has 79 MA's), (12, 48699), (14, 48624), (15, 48615),

Gene: Olak_94 Start: 65239, Stop: 65060, Start Num: 10

Candidate Starts for Olak_94:

(2, 65464), (4, 65410), (5, 65362), (Start: 10 @65239 has 79 MA's), (14, 65137), (15, 65128), (16, 65116),

Gene: Orwigg_93 Start: 64995, Stop: 64816, Start Num: 10

Candidate Starts for Orwigg_93:

(2, 65220), (4, 65166), (5, 65118), (Start: 10 @64995 has 79 MA's), (14, 64893), (15, 64884), (16, 64872),

Gene: PSullivan_75 Start: 45776, Stop: 45597, Start Num: 10

Candidate Starts for PSullivan_75:

(Start: 7 @45836 has 1 MA's), (Start: 10 @45776 has 79 MA's), (12, 45749), (14, 45674), (15, 45665), (16, 45653),

Gene: Pacifista_94 Start: 65080, Stop: 64901, Start Num: 10

Candidate Starts for Pacifista_94:

(2, 65305), (4, 65251), (5, 65203), (Start: 10 @65080 has 79 MA's), (14, 64978), (15, 64969), (16, 64957),

Gene: Paphu_72 Start: 46216, Stop: 46022, Start Num: 9

Candidate Starts for Paphu_72:

(Start: 9 @46216 has 2 MA's), (11, 46177), (12, 46174), (14, 46099), (15, 46090), (16, 46078),

Gene: Pari_82 Start: 47570, Stop: 47391, Start Num: 10

Candidate Starts for Pari_82:

(Start: 7 @47630 has 1 MA's), (Start: 10 @47570 has 79 MA's), (12, 47543), (14, 47468), (15, 47459), (16, 47447),

Gene: Parliament_78 Start: 49751, Stop: 49572, Start Num: 10

Candidate Starts for Parliament_78:

(Start: 7 @49811 has 1 MA's), (Start: 10 @49751 has 79 MA's), (12, 49724), (14, 49649), (15, 49640), (16, 49628),

Gene: PascalRango_75 Start: 46845, Stop: 46666, Start Num: 10

Candidate Starts for PascalRango_75:

(Start: 7 @46905 has 1 MA's), (Start: 10 @46845 has 79 MA's), (12, 46818), (14, 46743), (15, 46734), (16, 46722),

Gene: PattyP_77 Start: 47399, Stop: 47220, Start Num: 10

Candidate Starts for PattyP_77:

(Start: 7 @47459 has 1 MA's), (Start: 10 @47399 has 79 MA's), (12, 47372), (14, 47297), (15, 47288), (16, 47276),

Gene: Perseus_77 Start: 48832, Stop: 48653, Start Num: 10

Candidate Starts for Perseus_77:

(Start: 7 @48892 has 1 MA's), (Start: 10 @48832 has 79 MA's), (12, 48805), (14, 48730), (15, 48721), (16, 48709),

Gene: PhineBark_73 Start: 46130, Stop: 45951, Start Num: 10

Candidate Starts for PhineBark_73:

(Start: 10 @46130 has 79 MA's), (12, 46103), (14, 46028), (15, 46019),

Gene: Pita2_78 Start: 47272, Stop: 47093, Start Num: 10

Candidate Starts for Pita2_78:

(Start: 7 @47332 has 1 MA's), (Start: 10 @47272 has 79 MA's), (12, 47245), (14, 47170), (15, 47161), (16, 47149),

Gene: Puppet_72 Start: 47489, Stop: 47310, Start Num: 10
Candidate Starts for Puppet_72:
(Start: 10 @47489 has 79 MA's), (12, 47462), (14, 47387), (15, 47378),

Gene: STLscum_83 Start: 48046, Stop: 47867, Start Num: 10
Candidate Starts for STLscum_83:
(Start: 10 @48046 has 79 MA's), (12, 48019), (14, 47944), (15, 47935),

Gene: Sandaddy_75 Start: 47426, Stop: 47247, Start Num: 10
Candidate Starts for Sandaddy_75:
(Start: 7 @47486 has 1 MA's), (Start: 10 @47426 has 79 MA's), (12, 47399), (14, 47324), (15, 47315),
(16, 47303),

Gene: Scrick_93 Start: 65064, Stop: 64885, Start Num: 10
Candidate Starts for Scrick_93:
(2, 65289), (4, 65235), (5, 65187), (Start: 10 @65064 has 79 MA's), (14, 64962), (15, 64953), (16,
64941),

Gene: Selr12_96 Start: 65105, Stop: 64926, Start Num: 10
Candidate Starts for Selr12_96:
(2, 65330), (4, 65276), (5, 65228), (Start: 10 @65105 has 79 MA's), (14, 65003), (15, 64994), (16,
64982),

Gene: Sibs6_77 Start: 44740, Stop: 44561, Start Num: 10
Candidate Starts for Sibs6_77:
(Start: 7 @44800 has 1 MA's), (Start: 10 @44740 has 79 MA's), (12, 44713), (14, 44638), (15, 44629),
(16, 44617),

Gene: Slatt_94 Start: 65345, Stop: 65166, Start Num: 10
Candidate Starts for Slatt_94:
(2, 65570), (4, 65516), (5, 65468), (Start: 10 @65345 has 79 MA's), (14, 65243), (15, 65234), (16,
65222),

Gene: Smairt_81 Start: 49860, Stop: 49681, Start Num: 10
Candidate Starts for Smairt_81:
(Start: 9 @49875 has 2 MA's), (Start: 10 @49860 has 79 MA's), (12, 49833), (14, 49758), (15, 49749),
(16, 49737),

Gene: Sorpresa_76 Start: 47432, Stop: 47253, Start Num: 10
Candidate Starts for Sorpresa_76:
(Start: 7 @47492 has 1 MA's), (Start: 10 @47432 has 79 MA's), (12, 47405), (14, 47330), (15, 47321),
(16, 47309),

Gene: SpikeBT_74 Start: 46360, Stop: 46181, Start Num: 10
Candidate Starts for SpikeBT_74:
(Start: 7 @46420 has 1 MA's), (Start: 10 @46360 has 79 MA's), (12, 46333), (14, 46258), (15, 46249),
(16, 46237),

Gene: StewieG_73 Start: 44483, Stop: 44331, Start Num: 12
Candidate Starts for StewieG_73:
(Start: 7 @44570 has 1 MA's), (Start: 10 @44510 has 79 MA's), (12, 44483), (14, 44408), (15, 44399),
(16, 44387),

Gene: SwissCheese_81 Start: 47423, Stop: 47244, Start Num: 10

Candidate Starts for SwissCheese_81:

(Start: 7 @47483 has 1 MA's), (Start: 10 @47423 has 79 MA's), (12, 47396), (14, 47321), (15, 47312), (16, 47300),

Gene: Swole_78 Start: 47182, Stop: 47003, Start Num: 10

Candidate Starts for Swole_78:

(Start: 7 @47242 has 1 MA's), (Start: 10 @47182 has 79 MA's), (12, 47155), (14, 47080), (15, 47071), (16, 47059),

Gene: Tasp14_76 Start: 47470, Stop: 47291, Start Num: 10

Candidate Starts for Tasp14_76:

(Start: 7 @47530 has 1 MA's), (Start: 10 @47470 has 79 MA's), (12, 47443), (14, 47368), (15, 47359), (16, 47347),

Gene: Tote_73 Start: 44450, Stop: 44271, Start Num: 10

Candidate Starts for Tote_73:

(Start: 7 @44510 has 1 MA's), (Start: 10 @44450 has 79 MA's), (12, 44423), (14, 44348), (15, 44339), (16, 44327),

Gene: True_93 Start: 65063, Stop: 64884, Start Num: 10

Candidate Starts for True_93:

(2, 65288), (4, 65234), (5, 65186), (Start: 10 @65063 has 79 MA's), (14, 64961), (15, 64952), (16, 64940),

Gene: U2_71 Start: 47284, Stop: 47045, Start Num: 7

Candidate Starts for U2_71:

(Start: 7 @47284 has 1 MA's), (Start: 10 @47224 has 79 MA's), (12, 47197), (14, 47122), (15, 47113), (16, 47101),

Gene: Watermelon_80 Start: 48529, Stop: 48350, Start Num: 10

Candidate Starts for Watermelon_80:

(Start: 7 @48589 has 1 MA's), (Start: 10 @48529 has 79 MA's), (12, 48502), (14, 48427), (15, 48418), (16, 48406),

Gene: Zeeculate_73 Start: 47347, Stop: 47168, Start Num: 10

Candidate Starts for Zeeculate_73:

(Start: 7 @47407 has 1 MA's), (Start: 10 @47347 has 79 MA's), (12, 47320), (14, 47245), (15, 47236), (16, 47224),