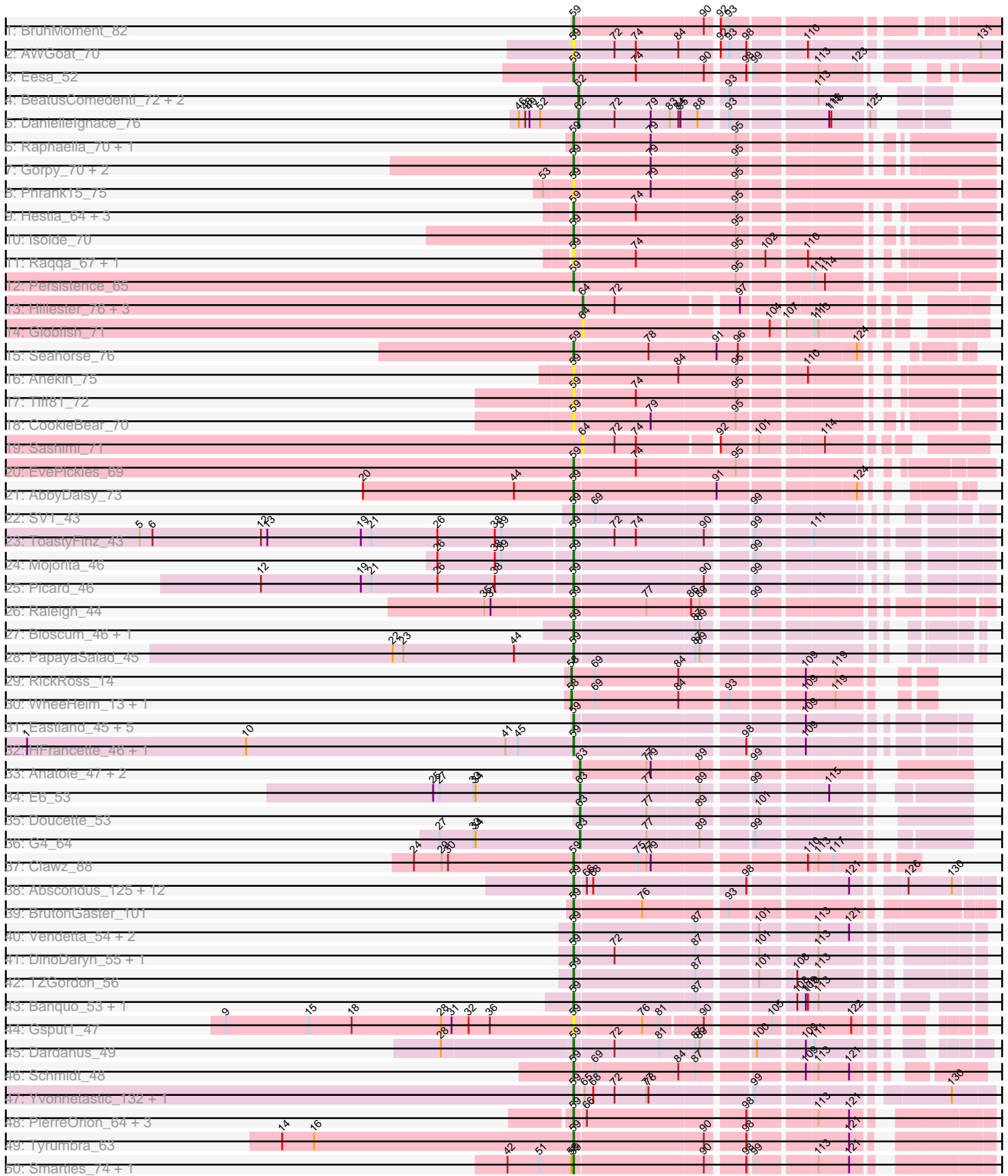


Pham 157632



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 157632 Report

This analysis was run 04/13/24 on database version 558.

WARNING: Pham size does not match number of genes in report. Either unphamerated genes have been added (by you) or starterator has removed genes due to invalid start codon.

Pham number 157632 has 168 members, 34 are drafts.

Phages represented in each track:

- Track 1 : BruhMoment_82
- Track 2 : AWGoat_70
- Track 3 : Eesa_52
- Track 4 : BeatusComedenti_72, Kitkat_73, Kellezio_71
- Track 5 : DanielleIgnace_76
- Track 6 : Raphaella_70, Richie_74
- Track 7 : Gorpy_70, Aikyam_70, Sakai_69
- Track 8 : Phrank15_75
- Track 9 : Hestia_64, BillyTP_72, Faja_73, YoungHarleezy_70
- Track 10 : Isolde_70
- Track 11 : Raqqa_67, BenchScraper_70
- Track 12 : Persistence_65
- Track 13 : Hillester_76, MidnightRain_74, RadFad_76, Auxilium_68
- Track 14 : Globfish_71
- Track 15 : Seahorse_76
- Track 16 : Anekin_75
- Track 17 : Tiff81_72
- Track 18 : CookieBear_70
- Track 19 : Sashimi_71
- Track 20 : EvePickles_69
- Track 21 : AbbyDaisy_73
- Track 22 : SV1_43
- Track 23 : ToastyFinz_43
- Track 24 : Mojorita_46
- Track 25 : Picard_46
- Track 26 : Raleigh_44
- Track 27 : Bioscum_46, Ididsumtinwong_47
- Track 28 : PapayaSalad_45
- Track 29 : RickRoss_14
- Track 30 : WheeHeim_13, Forthebois_13
- Track 31 : Eastland_45, Piccadilly_45, AxeJC_44, Vondra_44, Eklok_45, Cumberbatch_46
- Track 32 : HFrancette_46, Ignacio_45

- Track 33 : Anatole_47, B3_49, E1_47
- Track 34 : E6_53
- Track 35 : Doucette_53
- Track 36 : G4_64
- Track 37 : Clawz_88
- Track 38 : Abscondus_125, Cucurbita_127, ClubL_126, Culver_126, PhinkBoden_126, Miskis_125, Lozinak_126, Engineer_128, Norvs_125, Bachita_129, Dusty_122, Aphelion_126, Smoothie_127
- Track 39 : BrutonGaster_101
- Track 40 : Vendetta_54, Goib_55, Splinter_54
- Track 41 : DinoDaryn_55, Huffy_55
- Track 42 : TZGordon_56
- Track 43 : Banquo_53, TinaLin_53
- Track 44 : Gsput1_47
- Track 45 : Dardanus_49
- Track 46 : Schmidt_48
- Track 47 : Yvonnetastic_132, JonJames_135
- Track 48 : PierreOrion_64, Hermeonysus_64, Yeti_64, Onika_63
- Track 49 : Tyumbra_63
- Track 50 : Smarties_74, Ariadne_74
- Track 51 : Fireman_67
- Track 52 : Metamorphoo_67, RobsFeet_68
- Track 53 : Megan_61
- Track 54 : Matzah_62
- Track 55 : Kozi_60
- Track 56 : Terij_60
- Track 57 : Margaery_59
- Track 58 : Bran_47
- Track 59 : Kumotta_55, MargaretKali_51
- Track 60 : BrayBeast_55, Sarge_49
- Track 61 : Shoya_55
- Track 62 : TripleJ_56
- Track 63 : Jinkies_44
- Track 64 : BlackSpider_61
- Track 65 : Bauer_65, Zucker_67
- Track 66 : Hum25_56
- Track 67 : Blett_45, Pickles13_44
- Track 68 : Antuna_47
- Track 69 : Appa_45, Dropshot_45
- Track 70 : Phonegingi_45
- Track 71 : MenE_50
- Track 72 : Bush_48
- Track 73 : DelaGarza_43
- Track 74 : Lesiram_43
- Track 75 : Finemlucis_85
- Track 76 : Archie_82
- Track 77 : Baoshan_83, ZhongYanYuan_83
- Track 78 : Lewan_86
- Track 79 : Hafay_86, Claus_85
- Track 80 : GuuelaD_83
- Track 81 : Bazzle_83
- Track 82 : Bromden_84
- Track 83 : DyoEdafos_87

- Track 84 : Glaske16_68, Bongo_67, SlimJimmy_66, PegLeg_66, TyDawg_67, Bricole_66, Dulcita_68, Diminimus_68, LilhomieP_66, Skinny_69, IPHane7_67, Auspice_67
- Track 85 : Reindeer_69
- Track 86 : Aziz_74, Estes_75, GenevaB15_75, MrMagoo_77, GardenSalsa_76
- Track 87 : Nanosmite_72
- Track 88 : MrSmee_59
- Track 89 : Wildcat_78, Cosmo_78, MaryV_78, Azrael100_77
- Track 90 : EniyanLRS_74
- Track 91 : Kumao_63
- Track 92 : Finkle_70
- Track 93 : REQ3_26
- Track 94 : ArV2_54
- Track 95 : ValentiniPuff_105
- Track 96 : Jace_65
- Track 97 : pZL12_1c
- Track 98 : VanLee_42
- Track 99 : Gilgamesh_89

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

The start number called the most often in the published annotations is 59, it was called in 110 of the 134 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AWGoat_70, AbbyDaisy_73, Abscondus_125, Aikyam_70, Anekin_75, Antuna_47, Aphelion_126, Appa_45, Archie_82, Ariadne_74, Auspice_67, AxeJC_44, Aziz_74, Bachita_129, Banquo_53, Baoshan_83, Bauer_65, Bazzle_83, BenchScraper_70, BillyTP_72, Bioscum_46, BlackSpider_61, Blett_45, Bongo_67, Bran_47, BrayBeast_55, Bricole_66, Bromden_84, BruhMoment_82, BrutonGaster_101, Bush_48, Claus_85, Clawz_88, ClubL_126, CookieBear_70, Cucurbita_127, Culver_126, Cumberbatch_46, Dardanus_49, DelaGarza_43, Diminimus_68, DinoDaryn_55, Dropshot_45, Dulcita_68, Dusty_122, DyoEdafos_87, Eastland_45, Eesa_52, Eklok_45, Engineer_128, Estes_75, EvePickles_69, Faja_73, Finemlucis_85, Fireman_67, GardenSalsa_76, GenevaB15_75, Gilgamesh_89, Glaske16_68, Goib_55, Gorpy_70, Gsput1_47, GuuelaD_83, HFrancette_46, Hafay_86, Hermeonysus_64, Hestia_64, Huffy_55, Hum25_56, IPHane7_67, Ididsumtinwong_47, Ignacio_45, Isolde_70, Jace_65, JonJames_135, Kozie_60, Kumao_63, Kumotta_55, Lesiram_43, Lewan_86, LilhomieP_66, Lozinak_126, Margaery_59, MargaretKali_51, Matzah_62, MenE_50, Metamorphoo_67, Miskis_125, Mojarita_46, MrMagoo_77, Nanosmite_72, Norvs_125, Onika_63, PapayaSalad_45, PegLeg_66, Persistence_65, PhinkBoden_126, Phonegingi_45, Phrank15_75, Picard_46, Piccadilly_45, Pickles13_44, PierreOrion_64, Raleigh_44, Raphaella_70, Raqqa_67, Reindeer_69, Richie_74, RobsFeet_68, SV1_43, Sakai_69, Sarge_49, Schmidt_48, Seahorse_76, Shoya_55, Skinny_69, SlimJimmy_66, Smarties_74, Smoothie_127, Splinter_54, TZGordon_56, Terij_60, Tiff81_72, TinaLin_53, ToastyFinz_43, TripleJ_56, TyDawg_67, Tyumbra_63, ValentiniPuff_105, VanLee_42, Vendetta_54, Vondra_44, Yeti_64, YoungHarleezy_70, Yvonnetastic_132, ZhongYanYuan_83, Zucker_67,

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

- Megan_61, pZL12_1c,

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

- Anatole_47, ArV2_54, Auxilium_68, Azrael100_77, B3_49, BeatusComedenti_72, Cosmo_78, DanielleIgnace_76, Doucette_53, E1_47, E6_53, EniyanLRS_74, Finkle_70, Forthebois_13, G4_64, Globfish_71, Hillester_76, Jinkies_44, KellEzio_71, Kitkat_73, MaryV_78, MidnightRain_74, MrSmee_59, REQ3_26, RadFad_76, RickRoss_14, Sashimi_71, WheeHeim_13, Wildcat_78,

Summary by start number:

Start 58:

- Found in 6 of 168 (3.6%) of genes in pham
- Manual Annotations of this start: 4 of 134
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Forthebois_13 (BO), Megan_61 (EC), RickRoss_14 (BO), WheeHeim_13 (BO),

Start 59:

- Found in 139 of 168 (82.7%) of genes in pham
- Manual Annotations of this start: 110 of 134
- Called 98.6% of time when present
- Phage (with cluster) where this start called: AWGoat_70 (AP4), AbbyDaisy_73 (AY), Abscondus_125 (CQ), Aikyam_70 (AY), Anekin_75 (AY), Antuna_47 (GA), Aphelion_126 (CQ1), Appa_45 (GA), Archie_82 (L2), Ariadne_74 (EC), Auspice_67 (M1), AxeJC_44 (BP), Aziz_74 (M2), Bachita_129 (CQ1), Banquo_53 (CU1), Baoshan_83 (L2), Bauer_65 (FN), Bazzle_83 (L2), BenchScraper_70 (AY), BillyTP_72 (AY), Bioscum_46 (BC3), BlackSpider_61 (FN), Blett_45 (GA), Bongo_67 (M1), Bran_47 (EP), BrayBeast_55 (FB), Bricole_66 (M1), Bromden_84 (L4), BruhMoment_82 (AP3), BrutonGaster_101 (CQ2), Bush_48 (GA), Claus_85 (L2), Clawz_88 (CP), ClubL_126 (CQ1), CookieBear_70 (AY), Cucurbita_127 (CQ1), Culver_126 (CQ1), Cumberbatch_46 (BP), Dardanus_49 (CU3), DelaGarza_43 (GF), Diminimus_68 (M1), DinoDaryn_55 (CU1), Dropshot_45 (GA), Dulcita_68 (M1), Dusty_122 (CQ), DyoEdafos_87 (L4), Eastland_45 (BP), Eesa_52 (AS1), Eklok_45 (BP), Engineer_128 (CQ1), Estes_75 (M2), EvePickles_69 (AY), Faja_73 (AY), Finemlucis_85 (L2), Fireman_67 (EC), GardenSalsa_76 (M2), GenevaB15_75 (M2), Gilgamesh_89 (singleton), Glaske16_68 (M1), Goib_55 (CU1), Gorpy_70 (AY), Gsput1_47 (CU2), GuuelaD_83 (L2), HFrancette_46 (BP), Hafay_86 (L2), Hermeonysus_64 (EC), Hestia_64 (AY), Huffy_55 (CU1), Hum25_56 (FQ), IPhane7_67 (M1), Ididsumtinwong_47 (BC3), Ignacio_45 (BP), Isolde_70 (AY), Jace_65 (singleton), JonJames_135 (DD), Kozi_60 (EI), Kumao_63 (singleton), Kumotta_55 (FB), Lesiram_43 (GF), Lewan_86 (L2), LilhomieP_66 (M1), Lozinak_126 (CQ1), Margaery_59 (EI), MargaretKali_51 (FB), Matzah_62 (EI), MenE_50 (GA), Metamorphoo_67 (EC), Miskis_125 (CQ), Moajorita_46 (BC1), MrMagoo_77 (M2), Nanosmite_72 (M3), Norvs_125 (CQ), Onika_63 (EC), PapayaSalad_45 (BC3), PegLeg_66 (M1), Persistence_65 (AY), PhinkBoden_126 (CQ1), Phonegingi_45 (GA), Phrank15_75 (AY), Picard_46 (BC1), Piccadilly_45 (BP), Pickles13_44 (GA), PierreOrion_64 (EC), Raleigh_44 (BC2), Raphaella_70 (AY), Raqqa_67 (AY), Reindeer_69 (M1), Richie_74 (AY), RobsFeet_68 (EC), SV1_43 (BC1), Sakai_69 (AY), Sarge_49 (FB), Schmidt_48 (CU4), Seahorse_76 (AY), Shoya_55 (FB), Skinny_69 (M1), SlimJimmy_66 (M1), Smarties_74 (EC), Smoothie_127 (CQ1), Splinter_54 (CU1), TZGordon_56 (CU1), Terij_60 (EI),

Tiff81_72 (AY), TinaLin_53 (CU1), ToastyFinz_43 (BC1), TripleJ_56 (FJ), TyDawg_67 (M1), Tyrumbra_63 (EC), ValentiniPuff_105 (singleton), VanLee_42 (singleton), Vendetta_54 (CU1), Vondra_44 (BP), Yeti_64 (EC), YoungHarleezy_70 (AY), Yvonnestic_132 (DD), ZhongYanYuan_83 (L2), Zucker_67 (FN),

Start 60:

- Found in 2 of 168 (1.2%) of genes in pham
- Manual Annotations of this start: 1 of 134
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Finkle_70 (singleton), REQ3_26 (singleton),

Start 61:

- Found in 5 of 168 (3.0%) of genes in pham
- Manual Annotations of this start: 5 of 134
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Azrael100_77 (V), Cosmo_78 (V), EniyanLRS_74 (V), MaryV_78 (V), Wildcat_78 (V),

Start 62:

- Found in 4 of 168 (2.4%) of genes in pham
- Manual Annotations of this start: 4 of 134
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BeatusComedenti_72 (AT), Daniellelgnace_76 (AT), Kellezio_71 (AT), Kitkat_73 (AT),

Start 63:

- Found in 6 of 168 (3.6%) of genes in pham
- Manual Annotations of this start: 6 of 134
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Anatole_47 (BV), B3_49 (BV), Doucette_53 (BW), E1_47 (BV), E6_53 (BW), G4_64 (BW),

Start 64:

- Found in 9 of 168 (5.4%) of genes in pham
- Manual Annotations of this start: 4 of 134
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ArV2_54 (singleton), Auxilium_68 (AY), Globfish_71 (AY), Hillester_76 (AY), Jinkies_44 (FL), MidnightRain_74 (AY), MrSmee_59 (UNK), RadFad_76 (AY), Sashimi_71 (AY),

Start 71:

- Found in 2 of 168 (1.2%) of genes in pham
- No Manual Annotations of this start.
- Called 50.0% of time when present
- Phage (with cluster) where this start called: pZL12_1c (singleton),

Summary by clusters:

There are 39 clusters represented in this pham: FQ, singleton, AP3, DD, BO, AP4, FB, BW, BP, M3, M2, UNK, FJ, FL, FN, CU4, CU3, CU2, CU1, CQ2, CQ1, AS1, EI, EC, GF, L4, L2, AT, GA, V, AY, CQ, CP, EP, BV, M1, BC1, BC2, BC3,

Info for manual annotations of cluster AP3:

- Start number 59 was manually annotated 1 time for cluster AP3.

Info for manual annotations of cluster AS1:

- Start number 59 was manually annotated 1 time for cluster AS1.

Info for manual annotations of cluster AT:

- Start number 62 was manually annotated 4 times for cluster AT.

Info for manual annotations of cluster AY:

- Start number 59 was manually annotated 10 times for cluster AY.
- Start number 64 was manually annotated 3 times for cluster AY.

Info for manual annotations of cluster BC1:

- Start number 59 was manually annotated 4 times for cluster BC1.

Info for manual annotations of cluster BC2:

- Start number 59 was manually annotated 1 time for cluster BC2.

Info for manual annotations of cluster BC3:

- Start number 59 was manually annotated 3 times for cluster BC3.

Info for manual annotations of cluster BO:

- Start number 58 was manually annotated 3 times for cluster BO.

Info for manual annotations of cluster BP:

- Start number 59 was manually annotated 8 times for cluster BP.

Info for manual annotations of cluster BV:

- Start number 63 was manually annotated 3 times for cluster BV.

Info for manual annotations of cluster BW:

- Start number 63 was manually annotated 3 times for cluster BW.

Info for manual annotations of cluster CP:

- Start number 59 was manually annotated 1 time for cluster CP.

Info for manual annotations of cluster CQ:

- Start number 59 was manually annotated 1 time for cluster CQ.

Info for manual annotations of cluster CQ1:

- Start number 59 was manually annotated 9 times for cluster CQ1.

Info for manual annotations of cluster CQ2:

- Start number 59 was manually annotated 1 time for cluster CQ2.

Info for manual annotations of cluster CU1:

- Start number 59 was manually annotated 8 times for cluster CU1.

Info for manual annotations of cluster CU3:

- Start number 59 was manually annotated 1 time for cluster CU3.

Info for manual annotations of cluster CU4:

- Start number 59 was manually annotated 1 time for cluster CU4.

Info for manual annotations of cluster DD:

- Start number 59 was manually annotated 2 times for cluster DD.

Info for manual annotations of cluster EC:

- Start number 58 was manually annotated 1 time for cluster EC.
- Start number 59 was manually annotated 7 times for cluster EC.

Info for manual annotations of cluster EI:

- Start number 59 was manually annotated 4 times for cluster EI.

Info for manual annotations of cluster EP:

- Start number 59 was manually annotated 1 time for cluster EP.

Info for manual annotations of cluster FB:

- Start number 59 was manually annotated 5 times for cluster FB.

Info for manual annotations of cluster FJ:

- Start number 59 was manually annotated 1 time for cluster FJ.

Info for manual annotations of cluster FL:

- Start number 64 was manually annotated 1 time for cluster FL.

Info for manual annotations of cluster FN:

- Start number 59 was manually annotated 2 times for cluster FN.

Info for manual annotations of cluster GA:

- Start number 59 was manually annotated 6 times for cluster GA.

Info for manual annotations of cluster GF:

- Start number 59 was manually annotated 1 time for cluster GF.

Info for manual annotations of cluster L2:

- Start number 59 was manually annotated 5 times for cluster L2.

Info for manual annotations of cluster L4:

- Start number 59 was manually annotated 2 times for cluster L4.

Info for manual annotations of cluster M1:

- Start number 59 was manually annotated 13 times for cluster M1.

Info for manual annotations of cluster M2:

- Start number 59 was manually annotated 5 times for cluster M2.

Info for manual annotations of cluster M3:

- Start number 59 was manually annotated 1 time for cluster M3.

Info for manual annotations of cluster V:

- Start number 61 was manually annotated 5 times for cluster V.

Gene Information:

Gene: AWGoat_70 Start: 49925, Stop: 49359, Start Num: 59

Candidate Starts for AWGoat_70:

(Start: 59 @49925 has 110 MA's), (72, 49871), (74, 49844), (84, 49784), (92, 49739), (93, 49727), (98, 49703), (110, 49631), (131, 49412),

Gene: AbbyDaisy_73 Start: 38801, Stop: 39268, Start Num: 59

Candidate Starts for AbbyDaisy_73:

(20, 38504), (44, 38717), (Start: 59 @38801 has 110 MA's), (91, 38993), (124, 39170),

Gene: Abscondus_125 Start: 71279, Stop: 71788, Start Num: 59

Candidate Starts for Abscondus_125:

(Start: 59 @71279 has 110 MA's), (66, 71294), (68, 71303), (98, 71501), (121, 71627), (126, 71678), (130, 71738),

Gene: Aikyam_70 Start: 36571, Stop: 37089, Start Num: 59

Candidate Starts for Aikyam_70:

(Start: 59 @36571 has 110 MA's), (79, 36673), (95, 36790),

Gene: Anatole_47 Start: 31132, Stop: 31596, Start Num: 63

Candidate Starts for Anatole_47:

(Start: 63 @31132 has 6 MA's), (77, 31222), (79, 31228), (89, 31291), (99, 31351),

Gene: Anekin_75 Start: 39408, Stop: 39929, Start Num: 59

Candidate Starts for Anekin_75:

(Start: 59 @39408 has 110 MA's), (84, 39549), (95, 39627), (110, 39714),

Gene: Antuna_47 Start: 28781, Stop: 29272, Start Num: 59

Candidate Starts for Antuna_47:

(Start: 59 @28781 has 110 MA's), (93, 28979), (98, 29003), (121, 29129),

Gene: Aphelion_126 Start: 72342, Stop: 72881, Start Num: 59

Candidate Starts for Aphelion_126:

(Start: 59 @72342 has 110 MA's), (66, 72357), (68, 72366), (98, 72564), (121, 72690), (126, 72741), (130, 72801),

Gene: Appa_45 Start: 28538, Stop: 29032, Start Num: 59

Candidate Starts for Appa_45:

(Start: 59 @28538 has 110 MA's), (98, 28760), (102, 28781), (121, 28886),

Gene: ArV2_54 Start: 30423, Stop: 30827, Start Num: 64

Candidate Starts for ArV2_54:

(Start: 64 @30423 has 4 MA's),

Gene: Archie_82 Start: 55052, Stop: 55447, Start Num: 59

Candidate Starts for Archie_82:

(Start: 59 @55052 has 110 MA's), (72, 55103), (73, 55124), (77, 55145), (84, 55184), (86, 55199), (90, 55217), (100, 55274), (101, 55277), (106, 55307),

Gene: Ariadne_74 Start: 42439, Stop: 42945, Start Num: 59

Candidate Starts for Ariadne_74:

(42, 42349), (51, 42394), (Start: 58 @42436 has 4 MA's), (Start: 59 @42439 has 110 MA's), (90, 42613), (98, 42661), (99, 42667), (113, 42745), (121, 42787),

Gene: Auspice_67 Start: 43863, Stop: 44309, Start Num: 59

Candidate Starts for Auspice_67:

(54, 43827), (Start: 59 @43863 has 110 MA's), (74, 43947), (87, 44028), (92, 44052), (121, 44211),

Gene: Auxilium_68 Start: 35492, Stop: 35971, Start Num: 64

Candidate Starts for Auxilium_68:

(Start: 64 @35492 has 4 MA's), (72, 35537), (97, 35693),

Gene: AxeJC_44 Start: 30398, Stop: 30877, Start Num: 59

Candidate Starts for AxeJC_44:

(Start: 59 @30398 has 110 MA's), (109, 30689),

Gene: Aziz_74 Start: 45899, Stop: 46336, Start Num: 59

Candidate Starts for Aziz_74:

(Start: 59 @45899 has 110 MA's), (74, 45983), (87, 46064),

Gene: Azrael100_77 Start: 49155, Stop: 49544, Start Num: 61

Candidate Starts for Azrael100_77:

(Start: 61 @49155 has 5 MA's), (78, 49251), (86, 49302), (90, 49320), (99, 49374), (110, 49440), (121, 49494),

Gene: B3_49 Start: 31795, Stop: 32259, Start Num: 63

Candidate Starts for B3_49:

(Start: 63 @31795 has 6 MA's), (77, 31885), (79, 31891), (89, 31954), (99, 32014),

Gene: Bachita_129 Start: 72298, Stop: 72807, Start Num: 59

Candidate Starts for Bachita_129:

(Start: 59 @72298 has 110 MA's), (66, 72313), (68, 72322), (98, 72520), (121, 72646), (126, 72697), (130, 72757),

Gene: Banquo_53 Start: 35074, Stop: 35562, Start Num: 59

Candidate Starts for Banquo_53:

(Start: 59 @35074 has 110 MA's), (87, 35236), (108, 35353), (109, 35365), (110, 35368), (113, 35380),

Gene: Baoshan_83 Start: 55708, Stop: 56106, Start Num: 59

Candidate Starts for Baoshan_83:

(Start: 59 @55708 has 110 MA's), (72, 55759), (73, 55780), (77, 55801), (84, 55840), (86, 55855), (90, 55873), (100, 55930), (101, 55933), (109, 55990), (118, 56026),

Gene: Bauer_65 Start: 36668, Stop: 37132, Start Num: 59

Candidate Starts for Bauer_65:

(Start: 59 @36668 has 110 MA's), (78, 36767), (91, 36860), (124, 37037),

Gene: Bazzle_83 Start: 55608, Stop: 56003, Start Num: 59

Candidate Starts for Bazzle_83:

(Start: 59 @55608 has 110 MA's), (72, 55659), (73, 55680), (77, 55701), (86, 55755), (90, 55773), (100, 55830), (101, 55833), (106, 55863),

Gene: BeatusComedenti_72 Start: 43978, Stop: 44424, Start Num: 62

Candidate Starts for BeatusComedenti_72:

(Start: 62 @43978 has 4 MA's), (93, 44173), (113, 44281),

Gene: BenchScraper_70 Start: 37528, Stop: 38034, Start Num: 59

Candidate Starts for BenchScraper_70:

(Start: 59 @37528 has 110 MA's), (74, 37609), (95, 37747), (102, 37783), (110, 37834),

Gene: BillyTP_72 Start: 39383, Stop: 39889, Start Num: 59

Candidate Starts for BillyTP_72:

(Start: 59 @39383 has 110 MA's), (74, 39464), (95, 39602),

Gene: Bioscum_46 Start: 30484, Stop: 30945, Start Num: 59

Candidate Starts for Bioscum_46:

(Start: 59 @30484 has 110 MA's), (87, 30646), (89, 30652),

Gene: BlackSpider_61 Start: 35527, Stop: 36036, Start Num: 59

Candidate Starts for BlackSpider_61:

(Start: 59 @35527 has 110 MA's), (95, 35746),

Gene: Blett_45 Start: 28732, Stop: 29223, Start Num: 59

Candidate Starts for Blett_45:

(Start: 59 @28732 has 110 MA's), (98, 28954), (102, 28975), (113, 29038), (121, 29080),

Gene: Bongo_67 Start: 43867, Stop: 44313, Start Num: 59

Candidate Starts for Bongo_67:

(54, 43831), (Start: 59 @43867 has 110 MA's), (74, 43951), (87, 44032), (92, 44056), (121, 44215),

Gene: Bran_47 Start: 33745, Stop: 34197, Start Num: 59

Candidate Starts for Bran_47:

(2, 33049), (3, 33052), (4, 33067), (7, 33169), (8, 33190), (11, 33292), (17, 33382), (Start: 59 @33745 has 110 MA's), (74, 33829), (77, 33844), (81, 33862), (86, 33904), (94, 33949), (98, 33970), (121, 34096),

Gene: BrayBeast_55 Start: 31242, Stop: 31763, Start Num: 59

Candidate Starts for BrayBeast_55:

(Start: 59 @31242 has 110 MA's), (95, 31461),

Gene: Bricole_66 Start: 43589, Stop: 44035, Start Num: 59

Candidate Starts for Bricole_66:

(54, 43553), (Start: 59 @43589 has 110 MA's), (74, 43673), (87, 43754), (92, 43778), (121, 43937),

Gene: Bromden_84 Start: 55234, Stop: 55644, Start Num: 59

Candidate Starts for Bromden_84:

(Start: 59 @55234 has 110 MA's), (73, 55306), (77, 55327), (84, 55366), (86, 55381), (100, 55456), (101, 55459),

Gene: BruhMoment_82 Start: 54954, Stop: 54415, Start Num: 59

Candidate Starts for BruhMoment_82:

(Start: 59 @54954 has 110 MA's), (90, 54780), (92, 54768), (93, 54756),

Gene: BrutonGaster_101 Start: 65631, Stop: 66143, Start Num: 59

Candidate Starts for BrutonGaster_101:

(Start: 59 @65631 has 110 MA's), (76, 65721), (93, 65829),

Gene: Bush_48 Start: 28681, Stop: 29172, Start Num: 59

Candidate Starts for Bush_48:

(Start: 59 @28681 has 110 MA's), (98, 28903), (102, 28924), (113, 28987),

Gene: Claus_85 Start: 55406, Stop: 55789, Start Num: 59

Candidate Starts for Claus_85:

(Start: 59 @55406 has 110 MA's), (72, 55457), (73, 55478), (77, 55499), (84, 55538), (86, 55553), (90, 55571), (100, 55628), (101, 55631), (109, 55688), (118, 55724),

Gene: Clawz_88 Start: 56168, Stop: 56587, Start Num: 59

Candidate Starts for Clawz_88:

(24, 55943), (29, 55982), (30, 55991), (Start: 59 @56168 has 110 MA's), (75, 56252), (77, 56264), (79, 56270), (110, 56462), (113, 56474), (117, 56495),

Gene: ClubL_126 Start: 70869, Stop: 71378, Start Num: 59

Candidate Starts for ClubL_126:

(Start: 59 @70869 has 110 MA's), (66, 70884), (68, 70893), (98, 71091), (121, 71217), (126, 71268), (130, 71328),

Gene: CookieBear_70 Start: 38002, Stop: 38508, Start Num: 59

Candidate Starts for CookieBear_70:

(Start: 59 @38002 has 110 MA's), (79, 38104), (95, 38221),

Gene: Cosmo_78 Start: 49156, Stop: 49545, Start Num: 61

Candidate Starts for Cosmo_78:

(Start: 61 @49156 has 5 MA's), (78, 49252), (86, 49303), (90, 49321), (99, 49375), (110, 49441), (121, 49495),

Gene: Cucurbita_127 Start: 72611, Stop: 73120, Start Num: 59

Candidate Starts for Cucurbita_127:

(Start: 59 @72611 has 110 MA's), (66, 72626), (68, 72635), (98, 72833), (121, 72959), (126, 73010), (130, 73070),

Gene: Culver_126 Start: 70629, Stop: 71138, Start Num: 59

Candidate Starts for Culver_126:

(Start: 59 @70629 has 110 MA's), (66, 70644), (68, 70653), (98, 70851), (121, 70977), (126, 71028), (130, 71088),

Gene: Cumberbatch_46 Start: 30696, Stop: 31175, Start Num: 59

Candidate Starts for Cumberbatch_46:

(Start: 59 @30696 has 110 MA's), (109, 30987),

Gene: DanielleIgnace_76 Start: 47153, Stop: 47602, Start Num: 62

Candidate Starts for DanielleIgnace_76:

(46, 47069), (48, 47078), (49, 47084), (52, 47099), (Start: 62 @47153 has 4 MA's), (72, 47204), (79, 47255), (83, 47282), (84, 47294), (85, 47297), (88, 47318), (93, 47351), (115, 47477), (116, 47480), (125, 47528),

Gene: Dardanus_49 Start: 33729, Stop: 34202, Start Num: 59
Candidate Starts for Dardanus_49:
(28, 33552), (Start: 59 @33729 has 110 MA's), (72, 33783), (81, 33843), (87, 33891), (89, 33897),
(100, 33960), (109, 34020), (111, 34029),

Gene: DelaGarza_43 Start: 26483, Stop: 25980, Start Num: 59
Candidate Starts for DelaGarza_43:
(Start: 59 @26483 has 110 MA's), (98, 26261), (121, 26135),

Gene: Diminimus_68 Start: 43862, Stop: 44308, Start Num: 59
Candidate Starts for Diminimus_68:
(54, 43826), (Start: 59 @43862 has 110 MA's), (74, 43946), (87, 44027), (92, 44051), (121, 44210),

Gene: DinoDaryn_55 Start: 35610, Stop: 36101, Start Num: 59
Candidate Starts for DinoDaryn_55:
(Start: 59 @35610 has 110 MA's), (72, 35664), (87, 35772), (101, 35844), (113, 35916),

Gene: Doucette_53 Start: 34241, Stop: 34705, Start Num: 63
Candidate Starts for Doucette_53:
(Start: 63 @34241 has 6 MA's), (77, 34331), (89, 34400), (101, 34466),

Gene: Dropshot_45 Start: 28373, Stop: 28867, Start Num: 59
Candidate Starts for Dropshot_45:
(Start: 59 @28373 has 110 MA's), (98, 28595), (102, 28616), (121, 28721),

Gene: Dulcita_68 Start: 43863, Stop: 44309, Start Num: 59
Candidate Starts for Dulcita_68:
(54, 43827), (Start: 59 @43863 has 110 MA's), (74, 43947), (87, 44028), (92, 44052), (121, 44211),

Gene: Dusty_122 Start: 70841, Stop: 71350, Start Num: 59
Candidate Starts for Dusty_122:
(Start: 59 @70841 has 110 MA's), (66, 70856), (68, 70865), (98, 71063), (121, 71189), (126, 71240),
(130, 71300),

Gene: DyoEdafos_87 Start: 54732, Stop: 55139, Start Num: 59
Candidate Starts for DyoEdafos_87:
(Start: 59 @54732 has 110 MA's), (73, 54804), (77, 54825), (86, 54879), (100, 54954), (101, 54957),

Gene: E1_47 Start: 31132, Stop: 31596, Start Num: 63
Candidate Starts for E1_47:
(Start: 63 @31132 has 6 MA's), (77, 31222), (79, 31228), (89, 31291), (99, 31351),

Gene: E6_53 Start: 34060, Stop: 34527, Start Num: 63
Candidate Starts for E6_53:
(25, 33853), (27, 33862), (33, 33910), (34, 33913), (Start: 63 @34060 has 6 MA's), (77, 34150), (89,
34219), (99, 34279), (115, 34372),

Gene: Eastland_45 Start: 30656, Stop: 31135, Start Num: 59
Candidate Starts for Eastland_45:
(Start: 59 @30656 has 110 MA's), (109, 30947),

Gene: Eesa_52 Start: 34727, Stop: 35206, Start Num: 59
Candidate Starts for Eesa_52:

(Start: 59 @34727 has 110 MA's), (74, 34808), (90, 34901), (98, 34949), (99, 34955), (113, 35033), (123, 35084),

Gene: Eklok_45 Start: 30455, Stop: 30934, Start Num: 59

Candidate Starts for Eklok_45:

(Start: 59 @30455 has 110 MA's), (109, 30746),

Gene: Engineer_128 Start: 72271, Stop: 72780, Start Num: 59

Candidate Starts for Engineer_128:

(Start: 59 @72271 has 110 MA's), (66, 72286), (68, 72295), (98, 72493), (121, 72619), (126, 72670), (130, 72730),

Gene: EniyanLRS_74 Start: 48895, Stop: 49284, Start Num: 61

Candidate Starts for EniyanLRS_74:

(Start: 61 @48895 has 5 MA's), (77, 48988), (78, 48991), (86, 49042), (90, 49060), (99, 49114), (110, 49180), (121, 49234),

Gene: Estes_75 Start: 46028, Stop: 46465, Start Num: 59

Candidate Starts for Estes_75:

(Start: 59 @46028 has 110 MA's), (74, 46112), (87, 46193),

Gene: EvePickles_69 Start: 38354, Stop: 38866, Start Num: 59

Candidate Starts for EvePickles_69:

(Start: 59 @38354 has 110 MA's), (74, 38435), (95, 38573),

Gene: Faja_73 Start: 39133, Stop: 39654, Start Num: 59

Candidate Starts for Faja_73:

(Start: 59 @39133 has 110 MA's), (74, 39214), (95, 39352),

Gene: Finemlucis_85 Start: 56160, Stop: 56546, Start Num: 59

Candidate Starts for Finemlucis_85:

(57, 56142), (Start: 59 @56160 has 110 MA's), (72, 56211), (73, 56232), (77, 56253), (84, 56292), (86, 56307), (90, 56325), (100, 56382), (101, 56385), (109, 56442),

Gene: Finkle_70 Start: 43173, Stop: 43691, Start Num: 60

Candidate Starts for Finkle_70:

(50, 43113), (Start: 60 @43173 has 1 MA's), (70, 43206),

Gene: Fireman_67 Start: 42549, Stop: 43052, Start Num: 59

Candidate Starts for Fireman_67:

(Start: 59 @42549 has 110 MA's), (90, 42723), (98, 42771), (121, 42897),

Gene: Forthebois_13 Start: 6604, Stop: 6182, Start Num: 58

Candidate Starts for Forthebois_13:

(Start: 58 @6604 has 4 MA's), (69, 6571), (84, 6457), (93, 6400), (109, 6307), (119, 6268),

Gene: G4_64 Start: 35908, Stop: 36363, Start Num: 63

Candidate Starts for G4_64:

(27, 35710), (33, 35758), (34, 35761), (Start: 63 @35908 has 6 MA's), (77, 35998), (89, 36067), (99, 36127),

Gene: GardenSalsa_76 Start: 46450, Stop: 46887, Start Num: 59

Candidate Starts for GardenSalsa_76:

(Start: 59 @46450 has 110 MA's), (74, 46534), (87, 46615),

Gene: GenevaB15_75 Start: 45899, Stop: 46336, Start Num: 59

Candidate Starts for GenevaB15_75:

(Start: 59 @45899 has 110 MA's), (74, 45983), (87, 46064),

Gene: Gilgamesh_89 Start: 83492, Stop: 83953, Start Num: 59

Candidate Starts for Gilgamesh_89:

(Start: 59 @83492 has 110 MA's), (90, 83666), (98, 83714), (101, 83726),

Gene: Glaske16_68 Start: 43862, Stop: 44308, Start Num: 59

Candidate Starts for Glaske16_68:

(54, 43826), (Start: 59 @43862 has 110 MA's), (74, 43946), (87, 44027), (92, 44051), (121, 44210),

Gene: Globfish_71 Start: 37764, Stop: 38243, Start Num: 64

Candidate Starts for Globfish_71:

(Start: 64 @37764 has 4 MA's), (104, 38007), (107, 38022), (111, 38058), (113, 38064),

Gene: Goib_55 Start: 36148, Stop: 36654, Start Num: 59

Candidate Starts for Goib_55:

(Start: 59 @36148 has 110 MA's), (87, 36310), (101, 36382), (113, 36454), (121, 36496),

Gene: Gorpy_70 Start: 38991, Stop: 39509, Start Num: 59

Candidate Starts for Gorpy_70:

(Start: 59 @38991 has 110 MA's), (79, 39093), (95, 39210),

Gene: Gspu1_47 Start: 34521, Stop: 34976, Start Num: 59

Candidate Starts for Gspu1_47:

(9, 34035), (15, 34152), (18, 34212), (28, 34338), (31, 34353), (32, 34377), (36, 34407), (Start: 59 @34521 has 110 MA's), (76, 34608), (81, 34632), (90, 34686), (105, 34764), (122, 34860),

Gene: GuuelaD_83 Start: 55445, Stop: 55831, Start Num: 59

Candidate Starts for GuuelaD_83:

(Start: 59 @55445 has 110 MA's), (72, 55496), (77, 55538), (84, 55577), (86, 55592), (90, 55610), (100, 55667), (101, 55670), (109, 55727), (118, 55763),

Gene: HFrancette_46 Start: 31430, Stop: 31909, Start Num: 59

Candidate Starts for HFrancette_46:

(1, 30659), (10, 30968), (41, 31334), (45, 31352), (Start: 59 @31430 has 110 MA's), (98, 31652), (109, 31721),

Gene: Hafay_86 Start: 55401, Stop: 55784, Start Num: 59

Candidate Starts for Hafay_86:

(Start: 59 @55401 has 110 MA's), (72, 55452), (73, 55473), (77, 55494), (84, 55533), (86, 55548), (90, 55566), (100, 55623), (101, 55626), (109, 55683), (118, 55719),

Gene: Hermeonysus_64 Start: 40487, Stop: 40993, Start Num: 59

Candidate Starts for Hermeonysus_64:

(Start: 59 @40487 has 110 MA's), (66, 40502), (98, 40709), (113, 40793), (121, 40835),

Gene: Hestia_64 Start: 35356, Stop: 35877, Start Num: 59

Candidate Starts for Hestia_64:

(Start: 59 @35356 has 110 MA's), (74, 35437), (95, 35575),

Gene: Hillester_76 Start: 38827, Stop: 39300, Start Num: 64

Candidate Starts for Hillester_76:

(Start: 64 @38827 has 4 MA's), (72, 38872), (97, 39028),

Gene: Huffu_55 Start: 35610, Stop: 36101, Start Num: 59

Candidate Starts for Huffu_55:

(Start: 59 @35610 has 110 MA's), (72, 35664), (87, 35772), (101, 35844), (113, 35916),

Gene: Hum25_56 Start: 35235, Stop: 35735, Start Num: 59

Candidate Starts for Hum25_56:

(Start: 59 @35235 has 110 MA's), (68, 35259), (74, 35316), (90, 35409), (98, 35457), (117, 35562), (121, 35583),

Gene: IPhane7_67 Start: 43867, Stop: 44313, Start Num: 59

Candidate Starts for IPhane7_67:

(54, 43831), (Start: 59 @43867 has 110 MA's), (74, 43951), (87, 44032), (92, 44056), (121, 44215),

Gene: Ididsumtinwong_47 Start: 30484, Stop: 30948, Start Num: 59

Candidate Starts for Ididsumtinwong_47:

(Start: 59 @30484 has 110 MA's), (87, 30646), (89, 30652),

Gene: Ignacio_45 Start: 31333, Stop: 31812, Start Num: 59

Candidate Starts for Ignacio_45:

(1, 30562), (10, 30871), (41, 31237), (45, 31255), (Start: 59 @31333 has 110 MA's), (98, 31555), (109, 31624),

Gene: Isolde_70 Start: 38113, Stop: 38619, Start Num: 59

Candidate Starts for Isolde_70:

(Start: 59 @38113 has 110 MA's), (95, 38332),

Gene: Jace_65 Start: 39601, Stop: 40059, Start Num: 59

Candidate Starts for Jace_65:

(Start: 59 @39601 has 110 MA's), (66, 39613), (78, 39697), (96, 39811), (98, 39823), (99, 39829), (101, 39835),

Gene: Jinkies_44 Start: 33571, Stop: 34011, Start Num: 64

Candidate Starts for Jinkies_44:

(Start: 64 @33571 has 4 MA's), (75, 33646),

Gene: JonJames_135 Start: 77869, Stop: 78390, Start Num: 59

Candidate Starts for JonJames_135:

(Start: 59 @77869 has 110 MA's), (65, 77881), (68, 77893), (72, 77923), (77, 77965), (78, 77968), (99, 78097), (130, 78334),

Gene: KellEzio_71 Start: 43754, Stop: 44200, Start Num: 62

Candidate Starts for KellEzio_71:

(Start: 62 @43754 has 4 MA's), (93, 43949), (113, 44057),

Gene: Kitkat_73 Start: 44073, Stop: 44519, Start Num: 62

Candidate Starts for Kitkat_73:

(Start: 62 @44073 has 4 MA's), (93, 44268), (113, 44376),

Gene: Kozie_60 Start: 40548, Stop: 41045, Start Num: 59
Candidate Starts for Kozie_60:
(Start: 59 @40548 has 110 MA's), (98, 40770), (113, 40854), (121, 40896),

Gene: Kumao_63 Start: 44478, Stop: 44960, Start Num: 59
Candidate Starts for Kumao_63:
(Start: 59 @44478 has 110 MA's), (67, 44496), (68, 44502), (74, 44559), (96, 44688), (102, 44721),
(121, 44826),

Gene: Kumotta_55 Start: 31998, Stop: 32498, Start Num: 59
Candidate Starts for Kumotta_55:
(Start: 59 @31998 has 110 MA's), (74, 32079), (77, 32094), (92, 32184), (93, 32196), (98, 32220),
(121, 32346),

Gene: Lesiram_43 Start: 26454, Stop: 25951, Start Num: 59
Candidate Starts for Lesiram_43:
(40, 26550), (Start: 59 @26454 has 110 MA's), (98, 26232), (121, 26106),

Gene: Lewan_86 Start: 55312, Stop: 55698, Start Num: 59
Candidate Starts for Lewan_86:
(Start: 59 @55312 has 110 MA's), (72, 55363), (73, 55384), (77, 55405), (84, 55444), (86, 55459), (90,
55477), (100, 55534), (101, 55537), (109, 55594),

Gene: LilhomieP_66 Start: 43867, Stop: 44313, Start Num: 59
Candidate Starts for LilhomieP_66:
(54, 43831), (Start: 59 @43867 has 110 MA's), (74, 43951), (87, 44032), (92, 44056), (121, 44215),

Gene: Lozinak_126 Start: 71932, Stop: 72441, Start Num: 59
Candidate Starts for Lozinak_126:
(Start: 59 @71932 has 110 MA's), (66, 71947), (68, 71956), (98, 72154), (121, 72280), (126, 72331),
(130, 72391),

Gene: Margaery_59 Start: 40552, Stop: 41055, Start Num: 59
Candidate Starts for Margaery_59:
(43, 40465), (Start: 59 @40552 has 110 MA's), (90, 40726), (98, 40774), (113, 40858),

Gene: MargaretKali_51 Start: 30616, Stop: 31116, Start Num: 59
Candidate Starts for MargaretKali_51:
(Start: 59 @30616 has 110 MA's), (74, 30697), (77, 30712), (92, 30802), (93, 30814), (98, 30838),
(121, 30964),

Gene: MaryV_78 Start: 48977, Stop: 49366, Start Num: 61
Candidate Starts for MaryV_78:
(Start: 61 @48977 has 5 MA's), (78, 49073), (86, 49124), (90, 49142), (99, 49196), (110, 49262), (121,
49316),

Gene: Matzah_62 Start: 41397, Stop: 41900, Start Num: 59
Candidate Starts for Matzah_62:
(Start: 59 @41397 has 110 MA's), (90, 41571), (98, 41619), (99, 41625), (100, 41628), (113, 41703),

Gene: Megan_61 Start: 44759, Stop: 45289, Start Num: 58
Candidate Starts for Megan_61:

(Start: 58 @44759 has 4 MA's), (Start: 59 @44762 has 110 MA's), (75, 44846), (98, 44984), (111, 45062), (113, 45068), (121, 45110),

Gene: MenE_50 Start: 28803, Stop: 29294, Start Num: 59

Candidate Starts for MenE_50:

(Start: 59 @28803 has 110 MA's), (98, 29025), (121, 29151),

Gene: Metamorphoo_67 Start: 41843, Stop: 42346, Start Num: 59

Candidate Starts for Metamorphoo_67:

(Start: 59 @41843 has 110 MA's), (90, 42017), (98, 42065), (121, 42191),

Gene: MidnightRain_74 Start: 38613, Stop: 39080, Start Num: 64

Candidate Starts for MidnightRain_74:

(Start: 64 @38613 has 4 MA's), (72, 38658), (97, 38814),

Gene: Miskis_125 Start: 71364, Stop: 71873, Start Num: 59

Candidate Starts for Miskis_125:

(Start: 59 @71364 has 110 MA's), (66, 71379), (68, 71388), (98, 71586), (121, 71712), (126, 71763), (130, 71823),

Gene: Mojarita_46 Start: 31281, Stop: 31766, Start Num: 59

Candidate Starts for Mojarita_46:

(26, 31095), (38, 31176), (39, 31185), (Start: 59 @31281 has 110 MA's), (99, 31509),

Gene: MrMagoo_77 Start: 46450, Stop: 46887, Start Num: 59

Candidate Starts for MrMagoo_77:

(Start: 59 @46450 has 110 MA's), (74, 46534), (87, 46615),

Gene: MrSmee_59 Start: 34937, Stop: 35392, Start Num: 64

Candidate Starts for MrSmee_59:

(Start: 64 @34937 has 4 MA's), (82, 35042), (89, 35093), (99, 35156), (100, 35159), (101, 35162), (103, 35174), (112, 35228), (114, 35240), (116, 35249),

Gene: Nanosmite_72 Start: 45490, Stop: 45942, Start Num: 59

Candidate Starts for Nanosmite_72:

(Start: 59 @45490 has 110 MA's), (103, 45739),

Gene: Norvs_125 Start: 71351, Stop: 71860, Start Num: 59

Candidate Starts for Norvs_125:

(Start: 59 @71351 has 110 MA's), (66, 71366), (68, 71375), (98, 71573), (121, 71699), (126, 71750), (130, 71810),

Gene: Onika_63 Start: 40570, Stop: 41076, Start Num: 59

Candidate Starts for Onika_63:

(Start: 59 @40570 has 110 MA's), (66, 40585), (98, 40792), (113, 40876), (121, 40918),

Gene: PapayaSalad_45 Start: 30774, Stop: 31235, Start Num: 59

Candidate Starts for PapayaSalad_45:

(22, 30519), (23, 30534), (44, 30690), (Start: 59 @30774 has 110 MA's), (87, 30936), (89, 30942),

Gene: PegLeg_66 Start: 43606, Stop: 44052, Start Num: 59

Candidate Starts for PegLeg_66:

(54, 43570), (Start: 59 @43606 has 110 MA's), (74, 43690), (87, 43771), (92, 43795), (121, 43954),

Gene: Persistence_65 Start: 36167, Stop: 36694, Start Num: 59
Candidate Starts for Persistence_65:
(Start: 59 @36167 has 110 MA's), (95, 36386), (111, 36479), (114, 36494),

Gene: PhinkBoden_126 Start: 72216, Stop: 72725, Start Num: 59
Candidate Starts for PhinkBoden_126:
(Start: 59 @72216 has 110 MA's), (66, 72231), (68, 72240), (98, 72438), (121, 72564), (126, 72615),
(130, 72675),

Gene: Phonegingi_45 Start: 28583, Stop: 29074, Start Num: 59
Candidate Starts for Phonegingi_45:
(Start: 59 @28583 has 110 MA's), (98, 28805), (113, 28889), (121, 28931),

Gene: Phrank15_75 Start: 38031, Stop: 38585, Start Num: 59
Candidate Starts for Phrank15_75:
(53, 37992), (Start: 59 @38031 has 110 MA's), (79, 38133), (95, 38250),

Gene: Picard_46 Start: 31479, Stop: 31958, Start Num: 59
Candidate Starts for Picard_46:
(12, 31044), (19, 31185), (21, 31200), (26, 31293), (38, 31374), (Start: 59 @31479 has 110 MA's), (90,
31653), (99, 31707),

Gene: Piccadilly_45 Start: 30655, Stop: 31134, Start Num: 59
Candidate Starts for Piccadilly_45:
(Start: 59 @30655 has 110 MA's), (109, 30946),

Gene: Pickles13_44 Start: 28847, Stop: 29341, Start Num: 59
Candidate Starts for Pickles13_44:
(Start: 59 @28847 has 110 MA's), (98, 29069), (102, 29090), (113, 29153), (121, 29195),

Gene: PierreOrion_64 Start: 40801, Stop: 41307, Start Num: 59
Candidate Starts for PierreOrion_64:
(Start: 59 @40801 has 110 MA's), (66, 40816), (98, 41023), (113, 41107), (121, 41149),

Gene: REQ3_26 Start: 12169, Stop: 12615, Start Num: 60
Candidate Starts for REQ3_26:
(Start: 60 @12169 has 1 MA's), (71, 12205), (72, 12220), (87, 12328), (90, 12340), (96, 12376), (121,
12514),

Gene: RadFad_76 Start: 38827, Stop: 39300, Start Num: 64
Candidate Starts for RadFad_76:
(Start: 64 @38827 has 4 MA's), (72, 38872), (97, 39028),

Gene: Raleigh_44 Start: 33967, Stop: 34464, Start Num: 59
Candidate Starts for Raleigh_44:
(35, 33844), (37, 33853), (Start: 59 @33967 has 110 MA's), (77, 34063), (86, 34123), (89, 34135), (99,
34195),

Gene: Raphaella_70 Start: 37149, Stop: 37670, Start Num: 59
Candidate Starts for Raphaella_70:
(Start: 59 @37149 has 110 MA's), (79, 37251), (95, 37368),

Gene: Raqqa_67 Start: 35948, Stop: 36466, Start Num: 59
Candidate Starts for Raqqa_67:
(Start: 59 @35948 has 110 MA's), (74, 36029), (95, 36167), (102, 36203), (110, 36254),

Gene: Reindeer_69 Start: 45000, Stop: 45446, Start Num: 59
Candidate Starts for Reindeer_69:
(55, 44970), (57, 44976), (Start: 59 @45000 has 110 MA's), (74, 45084), (87, 45165), (108, 45279),
(121, 45348),

Gene: Richie_74 Start: 38954, Stop: 39472, Start Num: 59
Candidate Starts for Richie_74:
(Start: 59 @38954 has 110 MA's), (79, 39056), (95, 39173),

Gene: RickRoss_14 Start: 6690, Stop: 6268, Start Num: 58
Candidate Starts for RickRoss_14:
(Start: 58 @6690 has 4 MA's), (69, 6657), (84, 6543), (109, 6393), (119, 6354),

Gene: RobsFeet_68 Start: 42128, Stop: 42631, Start Num: 59
Candidate Starts for RobsFeet_68:
(Start: 59 @42128 has 110 MA's), (90, 42302), (98, 42350), (121, 42476),

Gene: SV1_43 Start: 30169, Stop: 30636, Start Num: 59
Candidate Starts for SV1_43:
(Start: 59 @30169 has 110 MA's), (69, 30196), (99, 30397),

Gene: Sakai_69 Start: 37702, Stop: 38220, Start Num: 59
Candidate Starts for Sakai_69:
(Start: 59 @37702 has 110 MA's), (79, 37804), (95, 37921),

Gene: Sarge_49 Start: 28989, Stop: 29513, Start Num: 59
Candidate Starts for Sarge_49:
(Start: 59 @28989 has 110 MA's), (95, 29208),

Gene: Sashimi_71 Start: 38075, Stop: 38557, Start Num: 64
Candidate Starts for Sashimi_71:
(Start: 64 @38075 has 4 MA's), (72, 38120), (74, 38147), (92, 38249), (101, 38297), (114, 38375),

Gene: Schmidt_48 Start: 32790, Stop: 33275, Start Num: 59
Candidate Starts for Schmidt_48:
(Start: 59 @32790 has 110 MA's), (69, 32817), (84, 32931), (87, 32952), (109, 33081), (113, 33096),
(121, 33138),

Gene: Seahorse_76 Start: 40120, Stop: 40581, Start Num: 59
Candidate Starts for Seahorse_76:
(Start: 59 @40120 has 110 MA's), (78, 40219), (91, 40312), (96, 40342), (124, 40489),

Gene: Shoya_55 Start: 31189, Stop: 31710, Start Num: 59
Candidate Starts for Shoya_55:
(Start: 59 @31189 has 110 MA's), (75, 31273), (77, 31285), (95, 31408),

Gene: Skinny_69 Start: 44296, Stop: 44742, Start Num: 59
Candidate Starts for Skinny_69:
(54, 44260), (Start: 59 @44296 has 110 MA's), (74, 44380), (87, 44461), (92, 44485), (121, 44644),

Gene: SlimJimmy_66 Start: 43851, Stop: 44297, Start Num: 59
Candidate Starts for SlimJimmy_66:
(54, 43815), (Start: 59 @43851 has 110 MA's), (74, 43935), (87, 44016), (92, 44040), (121, 44199),

Gene: Smarties_74 Start: 42439, Stop: 42945, Start Num: 59
Candidate Starts for Smarties_74:
(42, 42349), (51, 42394), (Start: 58 @42436 has 4 MA's), (Start: 59 @42439 has 110 MA's), (90, 42613), (98, 42661), (99, 42667), (113, 42745), (121, 42787),

Gene: Smoothie_127 Start: 71932, Stop: 72441, Start Num: 59
Candidate Starts for Smoothie_127:
(Start: 59 @71932 has 110 MA's), (66, 71947), (68, 71956), (98, 72154), (121, 72280), (126, 72331), (130, 72391),

Gene: Splinter_54 Start: 36171, Stop: 36677, Start Num: 59
Candidate Starts for Splinter_54:
(Start: 59 @36171 has 110 MA's), (87, 36333), (101, 36405), (113, 36477), (121, 36519),

Gene: TZGordon_56 Start: 35517, Stop: 36008, Start Num: 59
Candidate Starts for TZGordon_56:
(Start: 59 @35517 has 110 MA's), (87, 35679), (101, 35751), (108, 35796), (113, 35823),

Gene: Terij_60 Start: 39794, Stop: 40297, Start Num: 59
Candidate Starts for Terij_60:
(Start: 59 @39794 has 110 MA's), (98, 40016), (113, 40100), (121, 40142),

Gene: Tiff81_72 Start: 36649, Stop: 37155, Start Num: 59
Candidate Starts for Tiff81_72:
(Start: 59 @36649 has 110 MA's), (74, 36730), (95, 36868),

Gene: TinaLin_53 Start: 34968, Stop: 35471, Start Num: 59
Candidate Starts for TinaLin_53:
(Start: 59 @34968 has 110 MA's), (87, 35130), (108, 35247), (109, 35259), (110, 35262), (113, 35274),

Gene: ToastyFinz_43 Start: 32811, Stop: 33314, Start Num: 59
Candidate Starts for ToastyFinz_43:
(5, 32205), (6, 32223), (12, 32376), (13, 32385), (19, 32517), (21, 32532), (26, 32625), (38, 32706), (39, 32715), (Start: 59 @32811 has 110 MA's), (72, 32865), (74, 32892), (90, 32985), (99, 33039), (111, 33108),

Gene: TripleJ_56 Start: 34802, Stop: 35257, Start Num: 59
Candidate Starts for TripleJ_56:
(56, 34775), (Start: 59 @34802 has 110 MA's), (74, 34883), (90, 34976), (92, 34988), (99, 35030), (110, 35096),

Gene: TyDawg_67 Start: 43867, Stop: 44313, Start Num: 59
Candidate Starts for TyDawg_67:
(54, 43831), (Start: 59 @43867 has 110 MA's), (74, 43951), (87, 44032), (92, 44056), (121, 44215),

Gene: Tyrumbra_63 Start: 41408, Stop: 41914, Start Num: 59
Candidate Starts for Tyrumbra_63:

(14, 41000), (16, 41045), (Start: 59 @41408 has 110 MA's), (90, 41582), (98, 41630), (121, 41756),

Gene: ValentiniPuff_105 Start: 59002, Stop: 59508, Start Num: 59

Candidate Starts for ValentiniPuff_105:

(47, 58930), (Start: 59 @59002 has 110 MA's), (65, 59014), (66, 59017), (72, 59056), (81, 59116), (87, 59164), (90, 59176), (98, 59224), (127, 59398),

Gene: VanLee_42 Start: 32268, Stop: 32756, Start Num: 59

Candidate Starts for VanLee_42:

(Start: 59 @32268 has 110 MA's), (67, 32286), (74, 32349), (86, 32424), (90, 32442), (100, 32499), (129, 32712),

Gene: Vendetta_54 Start: 36171, Stop: 36677, Start Num: 59

Candidate Starts for Vendetta_54:

(Start: 59 @36171 has 110 MA's), (87, 36333), (101, 36405), (113, 36477), (121, 36519),

Gene: Vondra_44 Start: 30507, Stop: 30950, Start Num: 59

Candidate Starts for Vondra_44:

(Start: 59 @30507 has 110 MA's), (109, 30798),

Gene: WheeHeim_13 Start: 6628, Stop: 6206, Start Num: 58

Candidate Starts for WheeHeim_13:

(Start: 58 @6628 has 4 MA's), (69, 6595), (84, 6481), (93, 6424), (109, 6331), (119, 6292),

Gene: Wildcat_78 Start: 48987, Stop: 49376, Start Num: 61

Candidate Starts for Wildcat_78:

(Start: 61 @48987 has 5 MA's), (78, 49083), (86, 49134), (90, 49152), (99, 49206), (110, 49272), (121, 49326),

Gene: Yeti_64 Start: 40535, Stop: 41041, Start Num: 59

Candidate Starts for Yeti_64:

(Start: 59 @40535 has 110 MA's), (66, 40550), (98, 40757), (113, 40841), (121, 40883),

Gene: YoungHarleezy_70 Start: 37838, Stop: 38341, Start Num: 59

Candidate Starts for YoungHarleezy_70:

(Start: 59 @37838 has 110 MA's), (74, 37919), (95, 38057),

Gene: Yvonnetastic_132 Start: 74503, Stop: 75024, Start Num: 59

Candidate Starts for Yvonnetastic_132:

(Start: 59 @74503 has 110 MA's), (65, 74515), (68, 74527), (72, 74557), (77, 74599), (78, 74602), (99, 74731), (130, 74968),

Gene: ZhongYanYuan_83 Start: 55291, Stop: 55689, Start Num: 59

Candidate Starts for ZhongYanYuan_83:

(Start: 59 @55291 has 110 MA's), (72, 55342), (73, 55363), (77, 55384), (84, 55423), (86, 55438), (90, 55456), (100, 55513), (101, 55516), (109, 55573), (118, 55609),

Gene: Zucker_67 Start: 38807, Stop: 39271, Start Num: 59

Candidate Starts for Zucker_67:

(Start: 59 @38807 has 110 MA's), (78, 38906), (91, 38999), (124, 39176),

Gene: pZL12_1c Start: 1177, Stop: 662, Start Num: 71

Candidate Starts for pZL12_1c:

(Start: 59 @1216 has 110 MA's), (66, 1201), (68, 1192), (69, 1189), (71, 1177), (74, 1135), (77, 1120), (80, 1111), (86, 1057), (90, 1039), (98, 991), (101, 979), (108, 934), (109, 922), (113, 907), (114, 898), (120, 868), (121, 865), (128, 781),