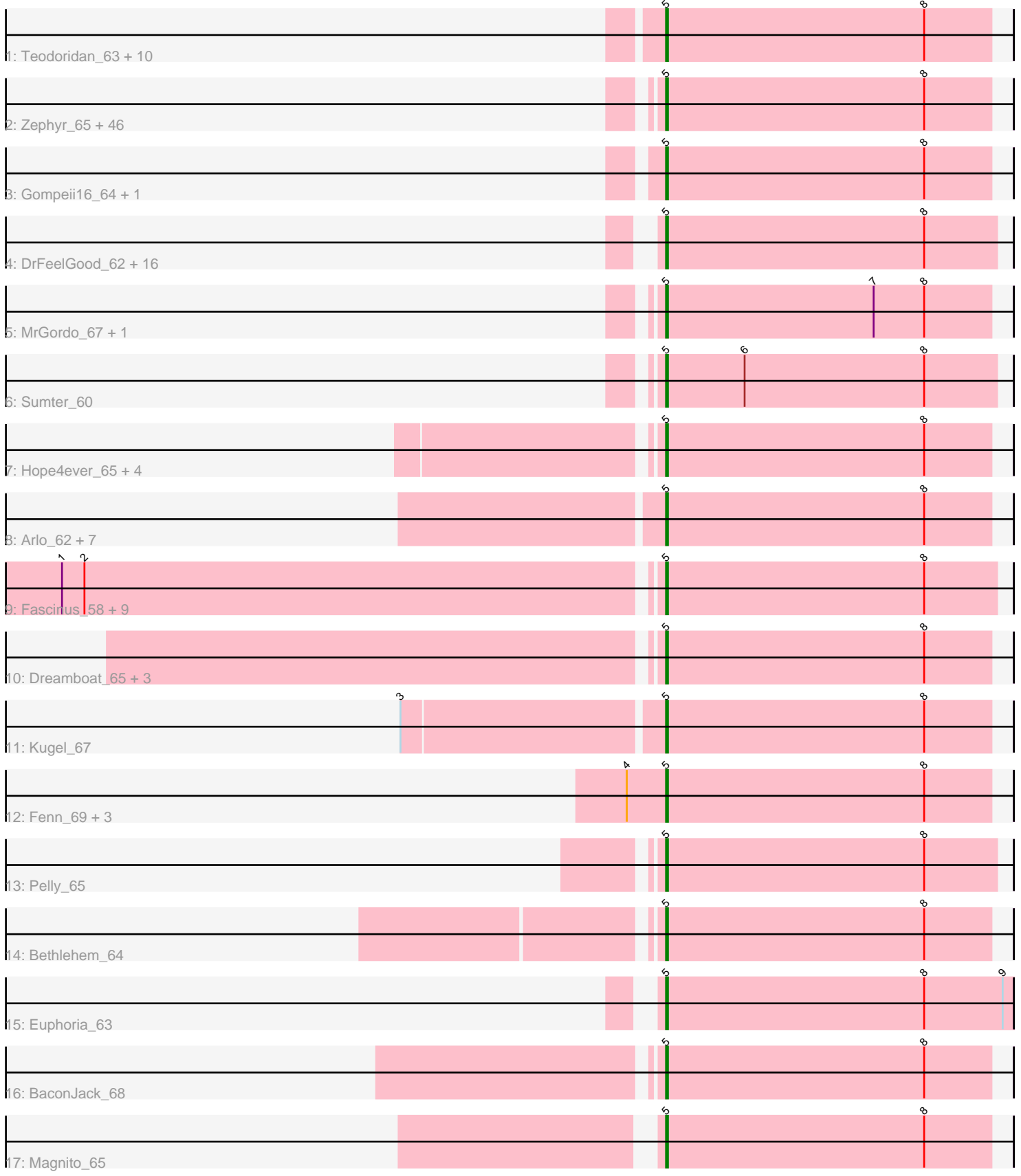


Pham 193853



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 193853 Report

This analysis was run 11/02/24 on database version 579.

Pham number 193853 has 117 members, 5 are drafts.

Phages represented in each track:

- Track 1 : Teodoridan_63, Niza_66, Gwendoluna_68, Atkinbua_67, Manatee_64, ProMouse_65, Ruotula_70, Thor_63, SarFire_63, Gandalf20_66, Espresso_61
- Track 2 : Zephyr_65, Pari_68, DD5_64, Applejack_64, Ashballer_67, TwoPeat_65, Burton_65, BK1_56, PacerPaul_64, Lockley_63, Rufus_66, Zeeculate_63, Petp2012_67, SkiPole_72, Bruns_66, Papez_66, Slagathor_66, Beatrix_63, Rajelicia_64, Sanya_60, Francis47_63, Anglerfish_64, BillKnuckles_61, Marsha_63, StrongArm_62, HermioneGrange_66, Bexan_61, Switzer_65, STLscum_73, Kykar_65, A6_56, BigMau_66, Alsfro_70, BluSpix_62, Michley_68, Scowl_65, Squee_67, Pepe_62, KBG_65, Ohno789_65, IgnatiusPatJac_64, Rubeus_63, Ringer_67, Agaliana_59, Arcanine_66, Traft412_67, MPlant7149_64
- Track 3 : Gompeii16_64, Bircsak_64
- Track 4 : DrFeelGood_62, JuliaChild_65, Ichabod_68, PSullivan_62, Swole_63, Sibs6_66, GrecoEtereo_63, Turj99_62, Museum_66, Dexes_64, Mryolo_62, Pita2_65, Briton15_68, Tote_60, Bob3_65, Molly_65, HanShotFirst_65
- Track 5 : MrGordo_67, Petruccio_66
- Track 6 : Sumter_60
- Track 7 : Hope4ever_65, Abrogate_640, Kanely_65, Altman_66, RidgeCB_64
- Track 8 : Arlo_62, Abbyshoes_66, BPBiabs31_67, Dussy_65, Kenmech_68, Nhonho_63, ConceptII_68, ILeeKay_66
- Track 9 : Fascinus_58, Maroc7_62, Blue_63, Target_66, Graduation_68, CactusRose_64, Paraselene_64, Bigfoot_56, Makemake_69, Carlyle_64
- Track 10 : Dreamboat_65, Jorgensen_67, PherrisBueller_64, Jasper_64
- Track 11 : Kugel_67
- Track 12 : Fenn_69, Nerujay_68, Naira_68, TheloniousMonk_67
- Track 13 : Pelly_65
- Track 14 : Bethlehem_64
- Track 15 : Euphoria_63
- Track 16 : BaconJack_68
- Track 17 : Magnito_65

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

The start number called the most often in the published annotations is 5, it was called in 112 of the 112 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- A6_56, Abbyshoes_66, Abrogate_640, Agaliana_59, Alsfro_70, Altman_66, Anglerfish_64, Applejack_64, Arcanine_66, Arlo_62, Ashballer_67, Atkinbua_67, BK1_56, BPBiebs31_67, BaconJack_68, Beatrix_63, Bethlehem_64, Bexan_61, BigMau_66, Bigfoot_56, BillKnuckles_61, Bircsak_64, BluSpix_62, Blue_63, Bob3_65, Briton15_68, Bruns_66, Burton_65, CactusRose_64, Carlyle_64, ConceptII_68, DD5_64, Dexes_64, DrFeelGood_62, Dreamboat_65, Dussy_65, Espresso_61, Euphoria_63, Fascinus_58, Fenn_69, Francis47_63, Gandalf20_66, Gompeii16_64, Graduation_68, GrecoEtereo_63, Gwendoluna_68, HanShotFirst_65, HermioneGrange_66, Hope4ever_65, ILeeKay_66, Ichabod_68, IgnatiusPatJac_64, Jasper_64, Jorgensen_67, JuliaChild_65, KBG_65, Kanely_65, Kenmech_68, Kugel_67, Kykar_65, Lockley_63, MPlant7149_64, Magnito_65, Makemake_69, Manatee_64, Maroc7_62, Marsha_63, Michley_68, Molly_65, MrGordo_67, Mryolo_62, Museum_66, Naira_68, Nerujay_68, Nhonho_63, Niza_66, Ohno789_65, PSullivan_62, PacerPaul_64, Papez_66, Paraselene_64, Pari_68, Pelly_65, Pepe_62, Petp2012_67, Petruccio_66, PherrisBueller_64, Pita2_65, ProMouse_65, Rajelicia_64, RidgeCB_64, Ringer_67, Rubeus_63, Rufus_66, Ruotula_70, STLscum_73, Sanya_60, SarFire_63, Scowl_65, Sibs6_66, SkiPole_72, Slagathor_66, Squee_67, StrongArm_62, Sumter_60, Switzer_65, Swole_63, Target_66, Teodoridan_63, TheloniousMonk_67, Thor_63, Tote_60, Traft412_67, Turj99_62, TwoPeat_65, Zeeculate_63, Zephyr_65,

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

-

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

-

Summary by start number:

Start 5:

- Found in 117 of 117 (100.0%) of genes in pham
- Manual Annotations of this start: 112 of 112
- Called 100.0% of time when present
- Phage (with cluster) where this start called: A6_56 (A1), Abbyshoes_66 (A1), Abrogate_640 (A1), Agaliana_59 (A1), Alsfro_70 (A1), Altman_66 (A1), Anglerfish_64 (A1), Applejack_64 (A1), Arcanine_66 (A1), Arlo_62 (A1), Ashballer_67 (A1), Atkinbua_67 (A1), BK1_56 (A1), BPBiebs31_67 (A1), BaconJack_68 (A1), Beatrix_63 (A1), Bethlehem_64 (A1), Bexan_61 (A1), BigMau_66 (A1), Bigfoot_56 (A1), BillKnuckles_61 (A1), Bircsak_64 (A1), BluSpix_62 (A1), Blue_63 (A1), Bob3_65 (A1), Briton15_68 (A1), Bruns_66 (A1), Burton_65 (A1), CactusRose_64 (A1), Carlyle_64 (A1), ConceptII_68 (A1), DD5_64 (A1), Dexes_64 (A1), DrFeelGood_62 (A1), Dreamboat_65 (A1), Dussy_65 (A1), Espresso_61 (A1), Euphoria_63 (A1), Fascinus_58 (A1), Fenn_69 (A1), Francis47_63 (A1), Gandalf20_66 (A1), Gompeii16_64 (A1), Graduation_68 (A1), GrecoEtereo_63 (A1), Gwendoluna_68 (A1), HanShotFirst_65 (A1), HermioneGrange_66 (A1), Hope4ever_65 (A1), ILeeKay_66 (A1), Ichabod_68 (A1), IgnatiusPatJac_64 (A1), Jasper_64 (A1), Jorgensen_67 (A1), JuliaChild_65 (A1), KBG_65 (A1), Kanely_65 (A1), Kenmech_68 (A1), Kugel_67 (A1), Kykar_65 (A1), Lockley_63 (A1), MPlant7149_64 (A1), Magnito_65 (A1), Makemake_69 (A1), Manatee_64 (A1), Maroc7_62 (A1), Marsha_63 (A1), Michley_68 (A1), Molly_65 (A1), MrGordo_67 (A1), Mryolo_62 (A1), Museum_66 (A1), Naira_68 (A1), Nerujay_68 (A1), Nhonho_63 (A1), Niza_66 (A1),

Ohno789_65 (A1), PSullivan_62 (A1), PacerPaul_64 (A1), Papez_66 (A1), Paraselene_64 (A1), Pari_68 (A1), Pelly_65 (A1), Pepe_62 (A1), Petp2012_67 (A1), Petruccio_66 (A1), PherrisBueller_64 (A1), Pita2_65 (A1), ProMouse_65 (A1), Rajelicia_64 (A1), RidgeCB_64 (A1), Ringer_67 (A1), Rubeus_63 (A1), Rufus_66 (A1), Ruotula_70 (A1), STLscum_73 (A1), Sanya_60 (A1), SarFire_63 (A1), Scowl_65 (A1), Sibs6_66 (A1), SkiPole_72 (A1), Slagathor_66 (A1), Squee_67 (A1), StrongArm_62 (A1), Sumter_60 (A1), Switzer_65 (A1), Swole_63 (A1), Target_66 (A1), Teodoridan_63 (A1), TheloniousMonk_67 (A1), Thor_63 (A1), Tote_60 (A1), Traft412_67 (A1), Turj99_62 (A1), TwoPeat_65 (A1), Zeeculate_63 (A1), Zephyr_65 (A1),

Summary by clusters:

There is one cluster represented in this pham: A1

Info for manual annotations of cluster A1:

- Start number 5 was manually annotated 112 times for cluster A1.

Gene Information:

Gene: A6_56 Start: 39904, Stop: 39731, Start Num: 5

Candidate Starts for A6_56:

(Start: 5 @39904 has 112 MA's), (8, 39766),

Gene: Abbyshoes_66 Start: 42857, Stop: 42684, Start Num: 5

Candidate Starts for Abbyshoes_66:

(Start: 5 @42857 has 112 MA's), (8, 42719),

Gene: Abrogate_640 Start: 43952, Stop: 43779, Start Num: 5

Candidate Starts for Abrogate_640:

(Start: 5 @43952 has 112 MA's), (8, 43814),

Gene: Agaliana_59 Start: 39238, Stop: 39062, Start Num: 5

Candidate Starts for Agaliana_59:

(Start: 5 @39238 has 112 MA's), (8, 39100),

Gene: Alsfro_70 Start: 42756, Stop: 42583, Start Num: 5

Candidate Starts for Alsfro_70:

(Start: 5 @42756 has 112 MA's), (8, 42618),

Gene: Altman_66 Start: 42394, Stop: 42221, Start Num: 5

Candidate Starts for Altman_66:

(Start: 5 @42394 has 112 MA's), (8, 42256),

Gene: Anglerfish_64 Start: 42566, Stop: 42393, Start Num: 5

Candidate Starts for Anglerfish_64:

(Start: 5 @42566 has 112 MA's), (8, 42428),

Gene: Applejack_64 Start: 40964, Stop: 40791, Start Num: 5

Candidate Starts for Applejack_64:

(Start: 5 @40964 has 112 MA's), (8, 40826),

Gene: Arcanine_66 Start: 43290, Stop: 43117, Start Num: 5
Candidate Starts for Arcanine_66:
(Start: 5 @43290 has 112 MA's), (8, 43152),

Gene: Arlo_62 Start: 41875, Stop: 41702, Start Num: 5
Candidate Starts for Arlo_62:
(Start: 5 @41875 has 112 MA's), (8, 41737),

Gene: Ashballer_67 Start: 43040, Stop: 42864, Start Num: 5
Candidate Starts for Ashballer_67:
(Start: 5 @43040 has 112 MA's), (8, 42902),

Gene: Atkinbua_67 Start: 42259, Stop: 42086, Start Num: 5
Candidate Starts for Atkinbua_67:
(Start: 5 @42259 has 112 MA's), (8, 42121),

Gene: BK1_56 Start: 39904, Stop: 39731, Start Num: 5
Candidate Starts for BK1_56:
(Start: 5 @39904 has 112 MA's), (8, 39766),

Gene: BPBiebs31_67 Start: 42981, Stop: 42808, Start Num: 5
Candidate Starts for BPBiebs31_67:
(Start: 5 @42981 has 112 MA's), (8, 42843),

Gene: BaconJack_68 Start: 45007, Stop: 44834, Start Num: 5
Candidate Starts for BaconJack_68:
(Start: 5 @45007 has 112 MA's), (8, 44869),

Gene: Beatrix_63 Start: 43127, Stop: 42954, Start Num: 5
Candidate Starts for Beatrix_63:
(Start: 5 @43127 has 112 MA's), (8, 42989),

Gene: Bethlehem_64 Start: 43657, Stop: 43484, Start Num: 5
Candidate Starts for Bethlehem_64:
(Start: 5 @43657 has 112 MA's), (8, 43519),

Gene: Bexan_61 Start: 42906, Stop: 42733, Start Num: 5
Candidate Starts for Bexan_61:
(Start: 5 @42906 has 112 MA's), (8, 42768),

Gene: BigMau_66 Start: 42795, Stop: 42622, Start Num: 5
Candidate Starts for BigMau_66:
(Start: 5 @42795 has 112 MA's), (8, 42657),

Gene: Bigfoot_56 Start: 41151, Stop: 40975, Start Num: 5
Candidate Starts for Bigfoot_56:
(1, 41463), (2, 41451), (Start: 5 @41151 has 112 MA's), (8, 41013),

Gene: BillKnuckles_61 Start: 43426, Stop: 43253, Start Num: 5
Candidate Starts for BillKnuckles_61:
(Start: 5 @43426 has 112 MA's), (8, 43288),

Gene: Bircsak_64 Start: 44152, Stop: 43979, Start Num: 5
Candidate Starts for Bircsak_64:
(Start: 5 @44152 has 112 MA's), (8, 44014),

Gene: BluSpix_62 Start: 38010, Stop: 37834, Start Num: 5
Candidate Starts for BluSpix_62:
(Start: 5 @38010 has 112 MA's), (8, 37872),

Gene: Blue_63 Start: 42851, Stop: 42675, Start Num: 5
Candidate Starts for Blue_63:
(1, 43163), (2, 43151), (Start: 5 @42851 has 112 MA's), (8, 42713),

Gene: Bob3_65 Start: 42068, Stop: 41895, Start Num: 5
Candidate Starts for Bob3_65:
(Start: 5 @42068 has 112 MA's), (8, 41930),

Gene: Briton15_68 Start: 43872, Stop: 43699, Start Num: 5
Candidate Starts for Briton15_68:
(Start: 5 @43872 has 112 MA's), (8, 43734),

Gene: Bruns_66 Start: 42006, Stop: 41833, Start Num: 5
Candidate Starts for Bruns_66:
(Start: 5 @42006 has 112 MA's), (8, 41868),

Gene: Burton_65 Start: 43828, Stop: 43655, Start Num: 5
Candidate Starts for Burton_65:
(Start: 5 @43828 has 112 MA's), (8, 43690),

Gene: CactusRose_64 Start: 42171, Stop: 41995, Start Num: 5
Candidate Starts for CactusRose_64:
(1, 42483), (2, 42471), (Start: 5 @42171 has 112 MA's), (8, 42033),

Gene: Carlyle_64 Start: 40957, Stop: 40781, Start Num: 5
Candidate Starts for Carlyle_64:
(1, 41269), (2, 41257), (Start: 5 @40957 has 112 MA's), (8, 40819),

Gene: ConceptII_68 Start: 43616, Stop: 43443, Start Num: 5
Candidate Starts for ConceptII_68:
(Start: 5 @43616 has 112 MA's), (8, 43478),

Gene: DD5_64 Start: 43169, Stop: 42996, Start Num: 5
Candidate Starts for DD5_64:
(Start: 5 @43169 has 112 MA's), (8, 43031),

Gene: Dexes_64 Start: 42893, Stop: 42717, Start Num: 5
Candidate Starts for Dexes_64:
(Start: 5 @42893 has 112 MA's), (8, 42755),

Gene: DrFeelGood_62 Start: 41427, Stop: 41251, Start Num: 5
Candidate Starts for DrFeelGood_62:
(Start: 5 @41427 has 112 MA's), (8, 41289),

Gene: Dreamboat_65 Start: 41428, Stop: 41255, Start Num: 5

Candidate Starts for Dreamboat_65:
(Start: 5 @41428 has 112 MA's), (8, 41290),

Gene: Dussy_65 Start: 42877, Stop: 42704, Start Num: 5
Candidate Starts for Dussy_65:
(Start: 5 @42877 has 112 MA's), (8, 42739),

Gene: Espresso_61 Start: 42102, Stop: 41929, Start Num: 5
Candidate Starts for Espresso_61:
(Start: 5 @42102 has 112 MA's), (8, 41964),

Gene: Euphoria_63 Start: 41953, Stop: 41768, Start Num: 5
Candidate Starts for Euphoria_63:
(Start: 5 @41953 has 112 MA's), (8, 41815), (9, 41773),

Gene: Fascinus_58 Start: 41665, Stop: 41489, Start Num: 5
Candidate Starts for Fascinus_58:
(1, 41977), (2, 41965), (Start: 5 @41665 has 112 MA's), (8, 41527),

Gene: Fenn_69 Start: 44128, Stop: 43955, Start Num: 5
Candidate Starts for Fenn_69:
(4, 44149), (Start: 5 @44128 has 112 MA's), (8, 43990),

Gene: Francis47_63 Start: 43082, Stop: 42906, Start Num: 5
Candidate Starts for Francis47_63:
(Start: 5 @43082 has 112 MA's), (8, 42944),

Gene: Gandalf20_66 Start: 43387, Stop: 43214, Start Num: 5
Candidate Starts for Gandalf20_66:
(Start: 5 @43387 has 112 MA's), (8, 43249),

Gene: Gompeii16_64 Start: 44153, Stop: 43980, Start Num: 5
Candidate Starts for Gompeii16_64:
(Start: 5 @44153 has 112 MA's), (8, 44015),

Gene: Graduation_68 Start: 43497, Stop: 43321, Start Num: 5
Candidate Starts for Graduation_68:
(1, 43809), (2, 43797), (Start: 5 @43497 has 112 MA's), (8, 43359),

Gene: GrecoEtereo_63 Start: 41282, Stop: 41109, Start Num: 5
Candidate Starts for GrecoEtereo_63:
(Start: 5 @41282 has 112 MA's), (8, 41144),

Gene: Gwendoluna_68 Start: 44214, Stop: 44041, Start Num: 5
Candidate Starts for Gwendoluna_68:
(Start: 5 @44214 has 112 MA's), (8, 44076),

Gene: HanShotFirst_65 Start: 43821, Stop: 43648, Start Num: 5
Candidate Starts for HanShotFirst_65:
(Start: 5 @43821 has 112 MA's), (8, 43683),

Gene: HermioneGrange_66 Start: 43289, Stop: 43116, Start Num: 5
Candidate Starts for HermioneGrange_66:

(Start: 5 @43289 has 112 MA's), (8, 43151),

Gene: Hope4ever_65 Start: 42273, Stop: 42100, Start Num: 5

Candidate Starts for Hope4ever_65:

(Start: 5 @42273 has 112 MA's), (8, 42135),

Gene: ILeeKay_66 Start: 42164, Stop: 41991, Start Num: 5

Candidate Starts for ILeeKay_66:

(Start: 5 @42164 has 112 MA's), (8, 42026),

Gene: Ichabod_68 Start: 43386, Stop: 43213, Start Num: 5

Candidate Starts for Ichabod_68:

(Start: 5 @43386 has 112 MA's), (8, 43248),

Gene: IgnatiusPatJac_64 Start: 41955, Stop: 41779, Start Num: 5

Candidate Starts for IgnatiusPatJac_64:

(Start: 5 @41955 has 112 MA's), (8, 41817),

Gene: Jasper_64 Start: 41314, Stop: 41141, Start Num: 5

Candidate Starts for Jasper_64:

(Start: 5 @41314 has 112 MA's), (8, 41176),

Gene: Jorgensen_67 Start: 42378, Stop: 42205, Start Num: 5

Candidate Starts for Jorgensen_67:

(Start: 5 @42378 has 112 MA's), (8, 42240),

Gene: JuliaChild_65 Start: 42607, Stop: 42434, Start Num: 5

Candidate Starts for JuliaChild_65:

(Start: 5 @42607 has 112 MA's), (8, 42469),

Gene: KBG_65 Start: 44136, Stop: 43963, Start Num: 5

Candidate Starts for KBG_65:

(Start: 5 @44136 has 112 MA's), (8, 43998),

Gene: Kanely_65 Start: 42171, Stop: 41998, Start Num: 5

Candidate Starts for Kanely_65:

(Start: 5 @42171 has 112 MA's), (8, 42033),

Gene: Kenmech_68 Start: 44003, Stop: 43830, Start Num: 5

Candidate Starts for Kenmech_68:

(Start: 5 @44003 has 112 MA's), (8, 43865),

Gene: Kugel_67 Start: 43811, Stop: 43638, Start Num: 5

Candidate Starts for Kugel_67:

(3, 43946), (Start: 5 @43811 has 112 MA's), (8, 43673),

Gene: Kykar_65 Start: 42752, Stop: 42579, Start Num: 5

Candidate Starts for Kykar_65:

(Start: 5 @42752 has 112 MA's), (8, 42614),

Gene: Lockley_63 Start: 42331, Stop: 42158, Start Num: 5

Candidate Starts for Lockley_63:

(Start: 5 @42331 has 112 MA's), (8, 42193),

Gene: MPlant7149_64 Start: 41177, Stop: 41004, Start Num: 5
Candidate Starts for MPlant7149_64:
(Start: 5 @41177 has 112 MA's), (8, 41039),

Gene: Magnito_65 Start: 42449, Stop: 42276, Start Num: 5
Candidate Starts for Magnito_65:
(Start: 5 @42449 has 112 MA's), (8, 42311),

Gene: Makemake_69 Start: 44192, Stop: 44019, Start Num: 5
Candidate Starts for Makemake_69:
(1, 44504), (2, 44492), (Start: 5 @44192 has 112 MA's), (8, 44054),

Gene: Manatee_64 Start: 41912, Stop: 41739, Start Num: 5
Candidate Starts for Manatee_64:
(Start: 5 @41912 has 112 MA's), (8, 41774),

Gene: Maroc7_62 Start: 42655, Stop: 42479, Start Num: 5
Candidate Starts for Maroc7_62:
(1, 42967), (2, 42955), (Start: 5 @42655 has 112 MA's), (8, 42517),

Gene: Marsha_63 Start: 43244, Stop: 43071, Start Num: 5
Candidate Starts for Marsha_63:
(Start: 5 @43244 has 112 MA's), (8, 43106),

Gene: Michley_68 Start: 42872, Stop: 42696, Start Num: 5
Candidate Starts for Michley_68:
(Start: 5 @42872 has 112 MA's), (8, 42734),

Gene: Molly_65 Start: 42557, Stop: 42384, Start Num: 5
Candidate Starts for Molly_65:
(Start: 5 @42557 has 112 MA's), (8, 42419),

Gene: MrGordo_67 Start: 42793, Stop: 42620, Start Num: 5
Candidate Starts for MrGordo_67:
(Start: 5 @42793 has 112 MA's), (7, 42682), (8, 42655),

Gene: Mryolo_62 Start: 41830, Stop: 41657, Start Num: 5
Candidate Starts for Mryolo_62:
(Start: 5 @41830 has 112 MA's), (8, 41692),

Gene: Museum_66 Start: 43776, Stop: 43603, Start Num: 5
Candidate Starts for Museum_66:
(Start: 5 @43776 has 112 MA's), (8, 43638),

Gene: Naira_68 Start: 44184, Stop: 44011, Start Num: 5
Candidate Starts for Naira_68:
(4, 44205), (Start: 5 @44184 has 112 MA's), (8, 44046),

Gene: Nerujay_68 Start: 43763, Stop: 43590, Start Num: 5
Candidate Starts for Nerujay_68:
(4, 43784), (Start: 5 @43763 has 112 MA's), (8, 43625),

Gene: Nhonho_63 Start: 42912, Stop: 42739, Start Num: 5
Candidate Starts for Nhonho_63:
(Start: 5 @42912 has 112 MA's), (8, 42774),

Gene: Niza_66 Start: 44057, Stop: 43884, Start Num: 5
Candidate Starts for Niza_66:
(Start: 5 @44057 has 112 MA's), (8, 43919),

Gene: Ohno789_65 Start: 42891, Stop: 42718, Start Num: 5
Candidate Starts for Ohno789_65:
(Start: 5 @42891 has 112 MA's), (8, 42753),

Gene: PSullivan_62 Start: 40674, Stop: 40501, Start Num: 5
Candidate Starts for PSullivan_62:
(Start: 5 @40674 has 112 MA's), (8, 40536),

Gene: PacerPaul_64 Start: 42449, Stop: 42273, Start Num: 5
Candidate Starts for PacerPaul_64:
(Start: 5 @42449 has 112 MA's), (8, 42311),

Gene: Papez_66 Start: 43615, Stop: 43442, Start Num: 5
Candidate Starts for Papez_66:
(Start: 5 @43615 has 112 MA's), (8, 43477),

Gene: Paraselene_64 Start: 42984, Stop: 42808, Start Num: 5
Candidate Starts for Paraselene_64:
(1, 43296), (2, 43284), (Start: 5 @42984 has 112 MA's), (8, 42846),

Gene: Pari_68 Start: 41967, Stop: 41794, Start Num: 5
Candidate Starts for Pari_68:
(Start: 5 @41967 has 112 MA's), (8, 41829),

Gene: Pelly_65 Start: 44132, Stop: 43956, Start Num: 5
Candidate Starts for Pelly_65:
(Start: 5 @44132 has 112 MA's), (8, 43994),

Gene: Pepe_62 Start: 41245, Stop: 41072, Start Num: 5
Candidate Starts for Pepe_62:
(Start: 5 @41245 has 112 MA's), (8, 41107),

Gene: Petp2012_67 Start: 44260, Stop: 44087, Start Num: 5
Candidate Starts for Petp2012_67:
(Start: 5 @44260 has 112 MA's), (8, 44122),

Gene: Petruccio_66 Start: 42081, Stop: 41908, Start Num: 5
Candidate Starts for Petruccio_66:
(Start: 5 @42081 has 112 MA's), (7, 41970), (8, 41943),

Gene: PherrisBueller_64 Start: 40965, Stop: 40792, Start Num: 5
Candidate Starts for PherrisBueller_64:
(Start: 5 @40965 has 112 MA's), (8, 40827),

Gene: Pita2_65 Start: 42171, Stop: 41998, Start Num: 5

Candidate Starts for Pita2_65:
(Start: 5 @42171 has 112 MA's), (8, 42033),

Gene: ProMouse_65 Start: 42680, Stop: 42507, Start Num: 5
Candidate Starts for ProMouse_65:
(Start: 5 @42680 has 112 MA's), (8, 42542),

Gene: Rajelicia_64 Start: 43800, Stop: 43627, Start Num: 5
Candidate Starts for Rajelicia_64:
(Start: 5 @43800 has 112 MA's), (8, 43662),

Gene: RidgeCB_64 Start: 42117, Stop: 41944, Start Num: 5
Candidate Starts for RidgeCB_64:
(Start: 5 @42117 has 112 MA's), (8, 41979),

Gene: Ringer_67 Start: 44223, Stop: 44050, Start Num: 5
Candidate Starts for Ringer_67:
(Start: 5 @44223 has 112 MA's), (8, 44085),

Gene: Rubeus_63 Start: 39937, Stop: 39761, Start Num: 5
Candidate Starts for Rubeus_63:
(Start: 5 @39937 has 112 MA's), (8, 39799),

Gene: Rufus_66 Start: 42621, Stop: 42445, Start Num: 5
Candidate Starts for Rufus_66:
(Start: 5 @42621 has 112 MA's), (8, 42483),

Gene: Ruotula_70 Start: 44718, Stop: 44545, Start Num: 5
Candidate Starts for Ruotula_70:
(Start: 5 @44718 has 112 MA's), (8, 44580),

Gene: STLscum_73 Start: 44438, Stop: 44265, Start Num: 5
Candidate Starts for STLscum_73:
(Start: 5 @44438 has 112 MA's), (8, 44300),

Gene: Sanya_60 Start: 43177, Stop: 43004, Start Num: 5
Candidate Starts for Sanya_60:
(Start: 5 @43177 has 112 MA's), (8, 43039),

Gene: SarFire_63 Start: 42158, Stop: 41985, Start Num: 5
Candidate Starts for SarFire_63:
(Start: 5 @42158 has 112 MA's), (8, 42020),

Gene: Scowl_65 Start: 42090, Stop: 41917, Start Num: 5
Candidate Starts for Scowl_65:
(Start: 5 @42090 has 112 MA's), (8, 41952),

Gene: Sibs6_66 Start: 40823, Stop: 40650, Start Num: 5
Candidate Starts for Sibs6_66:
(Start: 5 @40823 has 112 MA's), (8, 40685),

Gene: SkiPole_72 Start: 43711, Stop: 43538, Start Num: 5
Candidate Starts for SkiPole_72:

(Start: 5 @43711 has 112 MA's), (8, 43573),

Gene: Slagathor_66 Start: 44186, Stop: 44013, Start Num: 5

Candidate Starts for Slagathor_66:

(Start: 5 @44186 has 112 MA's), (8, 44048),

Gene: Squee_67 Start: 42317, Stop: 42144, Start Num: 5

Candidate Starts for Squee_67:

(Start: 5 @42317 has 112 MA's), (8, 42179),

Gene: StrongArm_62 Start: 43034, Stop: 42861, Start Num: 5

Candidate Starts for StrongArm_62:

(Start: 5 @43034 has 112 MA's), (8, 42896),

Gene: Sumter_60 Start: 42275, Stop: 42099, Start Num: 5

Candidate Starts for Sumter_60:

(Start: 5 @42275 has 112 MA's), (6, 42233), (8, 42137),

Gene: Switzer_65 Start: 43809, Stop: 43636, Start Num: 5

Candidate Starts for Switzer_65:

(Start: 5 @43809 has 112 MA's), (8, 43671),

Gene: Swole_63 Start: 42081, Stop: 41908, Start Num: 5

Candidate Starts for Swole_63:

(Start: 5 @42081 has 112 MA's), (8, 41943),

Gene: Target_66 Start: 42120, Stop: 41944, Start Num: 5

Candidate Starts for Target_66:

(1, 42432), (2, 42420), (Start: 5 @42120 has 112 MA's), (8, 41982),

Gene: Teodoridan_63 Start: 41395, Stop: 41222, Start Num: 5

Candidate Starts for Teodoridan_63:

(Start: 5 @41395 has 112 MA's), (8, 41257),

Gene: TheloniousMonk_67 Start: 44559, Stop: 44386, Start Num: 5

Candidate Starts for TheloniousMonk_67:

(4, 44580), (Start: 5 @44559 has 112 MA's), (8, 44421),

Gene: Thor_63 Start: 41516, Stop: 41343, Start Num: 5

Candidate Starts for Thor_63:

(Start: 5 @41516 has 112 MA's), (8, 41378),

Gene: Tote_60 Start: 39348, Stop: 39175, Start Num: 5

Candidate Starts for Tote_60:

(Start: 5 @39348 has 112 MA's), (8, 39210),

Gene: Traft412_67 Start: 43133, Stop: 42960, Start Num: 5

Candidate Starts for Traft412_67:

(Start: 5 @43133 has 112 MA's), (8, 42995),

Gene: Turj99_62 Start: 43060, Stop: 42884, Start Num: 5

Candidate Starts for Turj99_62:

(Start: 5 @43060 has 112 MA's), (8, 42922),

Gene: TwoPeat_65 Start: 42909, Stop: 42736, Start Num: 5
Candidate Starts for TwoPeat_65:
(Start: 5 @42909 has 112 MA's), (8, 42771),

Gene: Zeeculate_63 Start: 42718, Stop: 42542, Start Num: 5
Candidate Starts for Zeeculate_63:
(Start: 5 @42718 has 112 MA's), (8, 42580),

Gene: Zephyr_65 Start: 41819, Stop: 41646, Start Num: 5
Candidate Starts for Zephyr_65:
(Start: 5 @41819 has 112 MA's), (8, 41681),