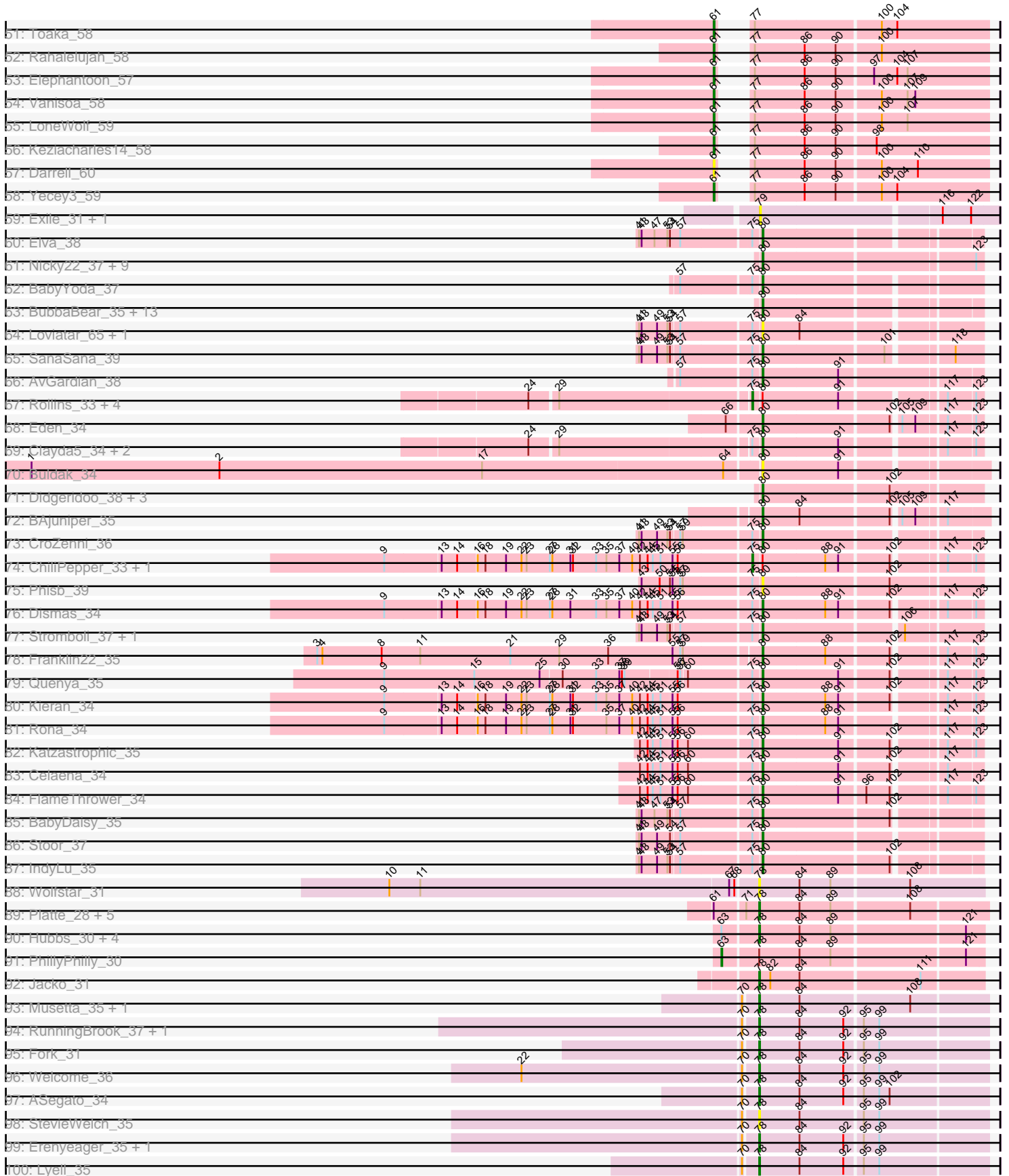


Pham 163314



Pham 163314



Pham 163314



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 163314 Report

This analysis was run 04/28/24 on database version 559.

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 163314 has 258 members, 22 are drafts.

Phages represented in each track:

- Track 1 : Ebony_57, Bud_57, Mulciber_57, Snape_57, Fibonacci_57, Munch_58, Orange_57, Bowtie_58, Hutc2_57, Insomnia_57, Gilberta_58, Et2Brutus_56, Salz_56, Jabith_58, Timothy_57, TinyTimmy_56, Aneem_58, Flaverint_58, Joselito_58, Lucivia_58, Petersenfast_56, Sham4_57
- Track 2 : MaCh_58, Bachome_59
- Track 3 : Mabel_57
- Track 4 : Refuge_56, Zimmer_55
- Track 5 : DarthPhader_54
- Track 6 : Pharaoh_53
- Track 7 : Steamy_54
- Track 8 : Phlei_47
- Track 9 : LastResort_62, Strosahl_64, Looper_63, Waits_64, Epsocamisio_61, ReMo_62, Rosalind_62, JSwag_63, Remus_64
- Track 10 : Battleship_66, DekHockey33_65, ShayRa_64, Soups_64, Switzerland_63
- Track 11 : MinecraftSteve_64, KatherineG_64
- Track 12 : Anon_61
- Track 13 : Oofda_65
- Track 14 : Nebulosus_62, Anaysia_64, Boohoo_64
- Track 15 : Nedarya_60
- Track 16 : PainterBoy_59
- Track 17 : EagleEye_60
- Track 18 : Lucyedi_59
- Track 19 : 40AC_59
- Track 20 : Crucio_58, Benvolio_55, ChipMunk_60, EvilGenius_60, FiringLine_58, Echild_58, Dignity_60, Whabigail7_59, Power_57, SnapTap_58, Leviathan_60, KingCyrus_60, Jerm_60, SemperFi_59, LilTurb_59, QueenBeesly_58, Smeagan_61, Agape74_60
- Track 21 : Adzzy_59
- Track 22 : Heffalump_57, QueenB2_57, Fameo_58
- Track 23 : VC3_61, C3_56, AN9_61, ANI8_61
- Track 24 : Pomar16_60, D29_56, D32_59, Kerberos_60, DBQu4n_60, Tomathan_60, Naji_60, Duplo_60, StarStuff_60

- Track 25 : Koduck_59, L5_56
- Track 26 : Buggy_60
- Track 27 : Dalmatian_59, Retro23_59, DudeLittle_57, Anselm_59
- Track 28 : Georgie2_59, AbbyPaige_60, Turbido_59, SweetiePie_58
- Track 29 : Acolyte_53
- Track 30 : BobSwaget_54, Rachaly_57, Lokk_55
- Track 31 : Jsquared_56
- Track 32 : TipsytheTRex_54
- Track 33 : Larenn_57, Malec_58
- Track 34 : Odin_56, Superchunk_56, Caraxes_58
- Track 35 : Ph8s_59
- Track 36 : Miko_55
- Track 37 : MissWhite_57
- Track 38 : Herbertwm_56
- Track 39 : Serenity_58
- Track 40 : SwirlSquare_63
- Track 41 : NothingSpecial_56
- Track 42 : Che12_59
- Track 43 : Journey13_52
- Track 44 : Anthony_54
- Track 45 : Arissanae_57
- Track 46 : Phaeder_58, Pioneer_58, Spouty_56, Priya_58, Eidsmoe_58, EmyBug_55, Myxus_58, Aliter_58, Ugenie5_55, PackMan_57, Beemo_58, Qobbit_58, Scherzo_58, HortumSL17_58, Conquerage_58, Alma_58, Fayely_58, Phonnegut_58, Catalina_59, Tubs_58
- Track 47 : Maminiaina_57, BogosyJay_57
- Track 48 : ExplosioNervosa_58
- Track 49 : Charm_56, DreamTeam1_56
- Track 50 : SheaKeira_56
- Track 51 : Toaka_58
- Track 52 : Rahalelujah_58
- Track 53 : Elephantoan_57
- Track 54 : Vanisoa_58
- Track 55 : LoneWolf_59
- Track 56 : Keziacharles14_58
- Track 57 : Darrell_60
- Track 58 : Yecey3_59
- Track 59 : Exile_31, Soondubu_31
- Track 60 : Elva_38
- Track 61 : Nicky22_37, Kenzers_36, QMacho_38, SarBear_36, Slay_37, Eula_37, Lynlen_36, Jovita_37, Swervy_37, Albedo_36
- Track 62 : BabyYoda_37
- Track 63 : BubbaBear_35, AnnaLie_37, Albright_34, Abigail_35, SansAfet_37, Finalfrontier_36, BelmontSKP_37, Arroyo_37, Doobus_35, Johnathan_35, Burritobowl_36, DickRichards_35, LimaBean_35, Avocadoman_35
- Track 64 : Loviatar_65, Icarian_41
- Track 65 : SanaSana_39
- Track 66 : AvGardian_38
- Track 67 : Rollins_33, Coltrane_33, Brahms_33, Armstrong_33, Bernstein_33
- Track 68 : Eden_34
- Track 69 : Clayda5_34, Skylord_33, Vitas_33
- Track 70 : Buldak_34
- Track 71 : Didgeridoo_38, TukTuk_37, Cashington_34, Lahqtemish_35

- Track 72 : BAjuniper_35
- Track 73 : CroZenni_36
- Track 74 : ChiliPepper_33, Sharkboy_35
- Track 75 : Phisb_39
- Track 76 : Dismas_34
- Track 77 : Stromboli_37, DirtyBubble_36
- Track 78 : Franklin22_35
- Track 79 : Quenya_35
- Track 80 : Kieran_34
- Track 81 : Rona_34
- Track 82 : Katzastrophic_35
- Track 83 : Celaena_34
- Track 84 : FlameThrower_34
- Track 85 : BabyDaisy_35
- Track 86 : Stoor_37
- Track 87 : IndyLu_35
- Track 88 : Wolfstar_31
- Track 89 : Platte_28, Hortus1_28, Alleb_29, Tandem_28, Pioneer3_28, OlinDD_28
- Track 90 : Hubbs_30, Roman_30, Lupine_29, Pavlo_29, DejaVu_31
- Track 91 : PhillyPhilly_30
- Track 92 : Jacko_31
- Track 93 : Musetta_35, Yuma_34
- Track 94 : RunningBrook_37, DustyDino_38
- Track 95 : Fork_31
- Track 96 : Welcome_36
- Track 97 : ASegato_34
- Track 98 : StevieWelch_35
- Track 99 : Erenyeager_35, Necrophoxinus_37
- Track 100 : Lyell_35
- Track 101 : BaileyBlu_34
- Track 102 : CallinAllBarbz_34
- Track 103 : A3Wally_20, A3Wally_373
- Track 104 : PauloDiaboli_375, PauloDiaboli_20
- Track 105 : Big4_20, Big4_346
- Track 106 : Zooman_331, Zooman_18

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

The start number called the most often in the published annotations is 61, it was called in 111 of the 236 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 40AC_59, AbbyPaige_60, Acolyte_53, Adzzy_59, Agape74_60, Aliter_58, Alma_58, Aneem_58, Anselm_59, Arissanae_57, Bachome_59, Beemo_58, Benvolio_55, BobSwaget_54, BogosyJay_57, Bowtie_58, Bud_57, Buggy_60, Caraxes_58, Catalina_59, Charm_56, Che12_59, ChipMunk_60, Conquerage_58, Crucio_58, D29_56, D32_59, DBQu4n_60, Dalmatian_59, Darrell_60, Dignity_60, DreamTeam1_56, DudeLittle_57, Duplo_60, Ebony_57, Echild_58, Eidsmoe_58, Elephantoon_57, EmyBug_55, Et2Brutus_56, EvilGenius_60, Fameo_58, Fayely_58, Fibonacci_57, FiringLine_58, Flaverint_58, Georgie2_59, Gilberta_58, Heffalump_57,

Herbertwm_56, HortumSL17_58, Hutc2_57, Insomnia_57, Jabith_58, Jerm_60, Joselito_58, Journey13_52, Kerberos_60, Keziacharles14_58, KingCyrus_60, Koduck_59, L5_56, Larenn_57, Leviathan_60, LilTurb_59, Lokk_55, LoneWolf_59, Lucivia_58, MaCh_58, Mabel_57, Malec_58, Maminiaina_57, Miko_55, MissWhite_57, Mulciber_57, Munch_58, Myxus_58, Naji_60, NothingSpecial_56, Odin_56, Orange_57, PackMan_57, Petersenfast_56, Ph8s_59, Phaeder_58, Pharaoh_53, Phlei_47, Phonnegut_58, Pioneer_58, Pomar16_60, Power_57, Priya_58, Qobbit_58, QueenB2_57, QueenBeesly_58, Rachaly_57, Rahalelujah_58, Retro23_59, Salz_56, Scherzo_58, SemperFi_59, Sham4_57, SheaKeira_56, Smeagan_61, SnapTap_58, Snape_57, Spouty_56, StarStuff_60, Steamy_54, Superchunk_56, SweetiePie_58, SwirlSquare_63, Timothy_57, TinyTimmy_56, Toaka_58, Tomathan_60, Tubs_58, Turbido_59, Ugenie5_55, Vanisoa_58, Whabigail7_59, Yecey3_59,

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

- Alleb_29, ExplosioNervosa_58, Hortus1_28, OlinDD_28, Pioneer3_28, Platte_28, Refuge_56, Tandem_28, Zimmer_55,

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

- A3Wally_20, A3Wally_373, AN9_61, ANI8_61, ASegato_34, Abigail_35, Albedo_36, Albright_34, Anaysia_64, AnnaLie_37, Anon_61, Anthony_54, Armstrong_33, Arroyo_37, AvGardian_38, Avocadoman_35, BAjuniper_35, BabyDaisy_35, BabyYoda_37, BaileyBlu_34, Battleship_66, BelmontSKP_37, Bernstein_33, Big4_20, Big4_346, Boohoo_64, Brahms_33, BubbaBear_35, Buldak_34, Burritobowl_36, C3_56, CallinAllBarbz_34, Cashington_34, Celaena_34, ChiliPepper_33, Clayda5_34, Coltrane_33, CroZenni_36, DARTHPhader_54, DejaVu_31, DekHockey33_65, DickRichards_35, Didgeridoo_38, DirtyBubble_36, Dismas_34, Doobus_35, DustyDino_38, EagleEye_60, Eden_34, Elva_38, Epsocamisio_61, Erenyeager_35, Eula_37, Exile_31, Finalfrontier_36, FlameThrower_34, Fork_31, Franklin22_35, Hubbs_30, Icarian_41, IndyLu_35, JSwag_63, Jacko_31, Johnathan_35, Jovita_37, Jsquared_56, KatherineG_64, Katzastrophic_35, Kenzers_36, Kieran_34, Lahqtemish_35, LastResort_62, LimaBean_35, Looper_63, Loviatar_65, Lucyedi_59, Lupine_29, Lyell_35, Lynlen_36, MinecraftSteve_64, Musetta_35, Nebulosus_62, Necrophoxinus_37, Nedarya_60, Nicky22_37, Oofda_65, PainterBoy_59, PauloDiaboli_20, PauloDiaboli_375, Pavlo_29, PhillyPhilly_30, Phisb_39, QMacho_38, Quenya_35, ReMo_62, Remus_64, Rollins_33, Roman_30, Rona_34, Rosalind_62, RunningBrook_37, SanaSana_39, SansAfet_37, SarBear_36, Serenity_58, Sharkboy_35, ShayRa_64, Skylord_33, Slay_37, Soondubu_31, Soups_64, StevieWelch_35, Stoor_37, Stromboli_37, Strosahl_64, Swervy_37, Switzerland_63, TopsytheTRex_54, TukTuk_37, VC3_61, Vitas_33, Waits_64, Welcome_36, Wolfstar_31, Yuma_34, Zooman_18, Zooman_331,

Summary by start number:

Start 58:

- Found in 4 of 258 (1.6%) of genes in pham
- Manual Annotations of this start: 4 of 236
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AN9_61 (A2), ANI8_61 (A2), C3_56 (A2), VC3_61 (A2),

Start 61:

- Found in 131 of 258 (50.8%) of genes in pham
- Manual Annotations of this start: 111 of 236
- Called 93.1% of time when present
- Phage (with cluster) where this start called: 40AC_59 (A17), AbbyPaige_60 (A2), Acolyte_53 (A2), Adzzy_59 (A2), Agape74_60 (A2), Aliter_58 (A9), Alma_58 (A9), Aneem_58 (A11), Anselm_59 (A2), Arissanae_57 (A9), Bachome_59 (A11), Beemo_58 (A9), Benvolio_55 (A2), BobSwaget_54 (A2), BogosyJay_57 (A9), Bowtie_58 (A11), Bud_57 (A11), Buggy_60 (A2), Caraxes_58 (A2), Catalina_59 (A9), Charm_56 (A9), Che12_59 (A2), ChipMunk_60 (A2), Conquerage_58 (A9), Crucio_58 (A2), D29_56 (A2), D32_59 (A2), DBQu4n_60 (A2), Dalmatian_59 (A2), Darrell_60 (A9), Dignity_60 (A2), DreamTeam1_56 (A9), DudeLittle_57 (A2), Duplo_60 (A2), Ebony_57 (A11), Echid_58 (A2), Eidsmoe_58 (A9), Elephantoon_57 (A9), EmyBug_55 (A9), Et2Brutus_56 (A11), EvilGenius_60 (A2), Fameo_58 (A2), Fayely_58 (A9), Fibonacci_57 (A11), FiringLine_58 (A2), Flaverint_58 (A11), Georgie2_59 (A2), Gilberta_58 (A11), Heffalump_57 (A2), Herbertwm_56 (A2), HortumSL17_58 (A9), Hutc2_57 (A11), Insomnia_57 (A11), Jabith_58 (A11), Jerm_60 (A2), Joselito_58 (A11), Journey13_52 (A2), Kerberos_60 (A2), Keziacharles14_58 (A9), KingCyrus_60 (A2), Koduck_59 (A2), L5_56 (A2), Larenn_57 (A2), Leviathan_60 (A2), LilTurb_59 (A2), Lokk_55 (A2), LoneWolf_59 (A9), Lucivia_58 (A11), MaCh_58 (A11), Mabel_57 (A11), Malec_58 (A2), Maminiaina_57 (A9), Miko_55 (A2), MissWhite_57 (A2), Mulciber_57 (A11), Munch_58 (A11), Myxus_58 (A9), Naji_60 (A2), NothingSpecial_56 (A2), Odin_56 (A2), Orange_57 (A11), PackMan_57 (A9), Petersenfast_56 (A11), Ph8s_59 (A2), Phaeder_58 (A9), Pharaoh_53 (A12), Phlei_47 (A13), Phonnegut_58 (A9), Pioneer_58 (A9), Pomar16_60 (A2), Power_57 (A2), Priya_58 (A9), Qobbit_58 (A9), QueenB2_57 (A2), QueenBeesly_58 (A2), Rachaly_57 (A2), Rahalelujah_58 (A9), Retro23_59 (A2), Salz_56 (A11), Scherzo_58 (A9), SemperFi_59 (A2), Sham4_57 (A11), SheaKeira_56 (A9), Smeagan_61 (A2), SnapTap_58 (A2), Snape_57 (A11), Spouty_56 (A9), StarStuff_60 (A2), Steamy_54 (A12), Superchunk_56 (A2), SweetiePie_58 (A2), SwirlSquare_63 (A2), Timothy_57 (A11), TinyTimmy_56 (A11), Toaka_58 (A9), Tomathan_60 (A2), Tubs_58 (A9), Turbido_59 (A2), Ugenie5_55 (A9), Vanisoa_58 (A9), Whabigail7_59 (A2), Yecy3_59 (A9),

Start 62:

- Found in 12 of 258 (4.7%) of genes in pham
- Manual Annotations of this start: 7 of 236
- Called 58.3% of time when present
- Phage (with cluster) where this start called: Anthony_54 (A20), DarthPhader_54 (A12), EagleEye_60 (A16), Jsquared_56 (A2), PainterBoy_59 (A16), Serenity_58 (A2), TipsytheTRex_54 (A2),

Start 63:

- Found in 6 of 258 (2.3%) of genes in pham
- Manual Annotations of this start: 1 of 236
- Called 16.7% of time when present
- Phage (with cluster) where this start called: PhillyPhilly_30 (ED1),

Start 65:

- Found in 1 of 258 (0.4%) of genes in pham
- Manual Annotations of this start: 1 of 236
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Nedarya_60 (A15),

Start 69:

- Found in 2 of 258 (0.8%) of genes in pham
- Manual Annotations of this start: 2 of 236
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Refuge_56 (A12), Zimmer_55 (A12),

Start 73:

- Found in 21 of 258 (8.1%) of genes in pham
- Manual Annotations of this start: 20 of 236
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Anaysia_64 (A15), Anon_61 (A15), Battleship_66 (A15), Boohoo_64 (A15), DekHockey33_65 (A15), Epsocamisio_61 (A15), JSwag_63 (A15), KatherineG_64 (A15), LastResort_62 (A15), Looper_63 (A15), MinecraftSteve_64 (A15), Nebulosus_62 (A15), Oofda_65 (A15), ReMo_62 (A15), Remus_64 (A15), Rosalind_62 (A15), ShayRa_64 (A15), Soups_64 (A15), Strosahl_64 (A15), Switzerland_63 (A15), Waits_64 (A15),

Start 74:

- Found in 2 of 258 (0.8%) of genes in pham
- Manual Annotations of this start: 1 of 236
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Lucyedi_59 (A16),

Start 75:

- Found in 30 of 258 (11.6%) of genes in pham
- Manual Annotations of this start: 7 of 236
- Called 23.3% of time when present
- Phage (with cluster) where this start called: Armstrong_33 (EB), Bernstein_33 (EB), Brahms_33 (EB), ChiliPepper_33 (EB), Coltrane_33 (EB), Rollins_33 (EB), Sharkboy_35 (EB),

Start 76:

- Found in 1 of 258 (0.4%) of genes in pham
- Manual Annotations of this start: 1 of 236
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BaileyBlu_34 (FP),

Start 77:

- Found in 115 of 258 (44.6%) of genes in pham
- Manual Annotations of this start: 2 of 236
- Called 1.7% of time when present
- Phage (with cluster) where this start called: CallinAllBarbz_34 (FP), ExplosioNervosa_58 (A9),

Start 78:

- Found in 25 of 258 (9.7%) of genes in pham
- Manual Annotations of this start: 21 of 236
- Called 96.0% of time when present
- Phage (with cluster) where this start called: ASegato_34 (ED2), Alleb_29 (ED1), DejaVu_31 (ED1), DustyDino_38 (ED2), Erenyeager_35 (ED2), Fork_31 (ED2), Hortus1_28 (ED1), Hubbs_30 (ED1), Jacko_31 (ED1), Lupine_29 (ED1), Lyell_35 (ED2), Musetta_35 (ED2), Necrophoxinus_37 (ED2), OlinDD_28 (ED1), Pavlo_29 (ED1), Pioneer3_28 (ED1), Platte_28 (ED1), Roman_30 (ED1), RunningBrook_37

(ED2), StevieWelch_35 (ED2), Tandem_28 (ED1), Welcome_36 (ED2), Wolfstar_31 (ED), Yuma_34 (ED2),

Start 79:

- Found in 4 of 258 (1.6%) of genes in pham
- Manual Annotations of this start: 2 of 236
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Exile_31 (AZ), Soondubu_31 (AZ), Zooman_18 (GD2), Zooman_331 (GD2),

Start 80:

- Found in 68 of 258 (26.4%) of genes in pham
- Manual Annotations of this start: 56 of 236
- Called 89.7% of time when present
- Phage (with cluster) where this start called: A3Wally_20 (GD1), A3Wally_373 (GD1), Abigail_35 (EB), Albedo_36 (EB), Albright_34 (EB), AnnaLie_37 (EB), Arroyo_37 (EB), AvGardian_38 (EB), Avocadoman_35 (EB), BAjuniper_35 (EB), BabyDaisy_35 (EB), BabyYoda_37 (EB), BelmontSKP_37 (EB), Big4_20 (GD2), Big4_346 (GD2), BubbaBear_35 (EB), Buldak_34 (EB), Burritobowl_36 (EB), Cashington_34 (EB), Celaena_34 (EB), Clayda5_34 (EB), CroZenni_36 (EB), DickRichards_35 (EB), Didgeridoo_38 (EB), DirtyBubble_36 (EB), Dismas_34 (EB), Doobus_35 (EB), Eden_34 (EB), Elva_38 (EB), Eula_37 (EB), Finalfrontier_36 (EB), FlameThrower_34 (EB), Franklin22_35 (EB), Icarian_41 (EB), IndyLu_35 (EB), Johnathan_35 (EB), Jovita_37 (EB), Katzastrophic_35 (EB), Kenzers_36 (EB), Kieran_34 (EB), Lahqtemish_35 (EB), LimaBean_35 (EB), Loviatar_65 (EB), Lynlen_36 (EB), Nicky22_37 (EB), PauloDiaboli_20 (GD1), PauloDiaboli_375 (GD1), Phisb_39 (EB), QMacho_38 (EB), Quenya_35 (EB), Rona_34 (EB), SanaSana_39 (EB), SansAfet_37 (EB), SarBear_36 (EB), Skylord_33 (EB), Slay_37 (EB), Stoor_37 (EB), Stromboli_37 (EB), Swervy_37 (EB), TukTuk_37 (EB), Vitas_33 (EB),

Summary by clusters:

There are 17 clusters represented in this pham: A15, FP, GD2, A16, A11, A13, A12, ED, A17, EB, ED2, A20, ED1, A9, AZ, GD1, A2,

Info for manual annotations of cluster A11:

- Start number 61 was manually annotated 22 times for cluster A11.

Info for manual annotations of cluster A12:

- Start number 61 was manually annotated 2 times for cluster A12.
- Start number 62 was manually annotated 1 time for cluster A12.
- Start number 69 was manually annotated 2 times for cluster A12.

Info for manual annotations of cluster A15:

- Start number 65 was manually annotated 1 time for cluster A15.
- Start number 73 was manually annotated 20 times for cluster A15.

Info for manual annotations of cluster A16:

- Start number 62 was manually annotated 2 times for cluster A16.
- Start number 74 was manually annotated 1 time for cluster A16.

Info for manual annotations of cluster A2:

- Start number 58 was manually annotated 4 times for cluster A2.
- Start number 61 was manually annotated 56 times for cluster A2.
- Start number 62 was manually annotated 3 times for cluster A2.

Info for manual annotations of cluster A20:

- Start number 62 was manually annotated 1 time for cluster A20.

Info for manual annotations of cluster A9:

- Start number 61 was manually annotated 31 times for cluster A9.
- Start number 77 was manually annotated 1 time for cluster A9.

Info for manual annotations of cluster EB:

- Start number 75 was manually annotated 7 times for cluster EB.
- Start number 80 was manually annotated 50 times for cluster EB.

Info for manual annotations of cluster ED1:

- Start number 63 was manually annotated 1 time for cluster ED1.
- Start number 78 was manually annotated 12 times for cluster ED1.

Info for manual annotations of cluster ED2:

- Start number 78 was manually annotated 9 times for cluster ED2.

Info for manual annotations of cluster FP:

- Start number 76 was manually annotated 1 time for cluster FP.
- Start number 77 was manually annotated 1 time for cluster FP.

Info for manual annotations of cluster GD1:

- Start number 80 was manually annotated 4 times for cluster GD1.

Info for manual annotations of cluster GD2:

- Start number 79 was manually annotated 2 times for cluster GD2.
- Start number 80 was manually annotated 2 times for cluster GD2.

Gene Information:

Gene: 40AC_59 Start: 39531, Stop: 39259, Start Num: 61

Candidate Starts for 40AC_59:

(Start: 61 @39531 has 111 MA's), (81, 39510), (82, 39504), (93, 39417), (100, 39381), (107, 39351),

Gene: A3Wally_20 Start: 7196, Stop: 7426, Start Num: 80

Candidate Starts for A3Wally_20:

(Start: 80 @7196 has 56 MA's), (88, 7268), (124, 7415),

Gene: A3Wally_373 Start: 186417, Stop: 186647, Start Num: 80

Candidate Starts for A3Wally_373:

(Start: 80 @186417 has 56 MA's), (88, 186489), (124, 186636),

Gene: AN9_61 Start: 38705, Stop: 38394, Start Num: 58

Candidate Starts for AN9_61:

(Start: 58 @38705 has 4 MA's), (Start: 62 @38666 has 7 MA's), (Start: 77 @38657 has 2 MA's), (90, 38564), (100, 38516), (107, 38486),

Gene: ANI8_61 Start: 38705, Stop: 38394, Start Num: 58

Candidate Starts for ANI8_61:

(Start: 58 @38705 has 4 MA's), (Start: 62 @38666 has 7 MA's), (Start: 77 @38657 has 2 MA's), (90, 38564), (100, 38516), (107, 38486),

Gene: ASegato_34 Start: 9990, Stop: 10244, Start Num: 78

Candidate Starts for ASegato_34:

(70, 9975), (Start: 78 @9990 has 21 MA's), (84, 10035), (92, 10086), (95, 10104), (99, 10122), (102, 10134),

Gene: AbbyPaige_60 Start: 38775, Stop: 38503, Start Num: 61

Candidate Starts for AbbyPaige_60:

(Start: 61 @38775 has 111 MA's), (Start: 77 @38766 has 2 MA's), (81, 38754), (82, 38748),

Gene: Abigail_35 Start: 24992, Stop: 25222, Start Num: 80

Candidate Starts for Abigail_35:

(Start: 80 @24992 has 56 MA's),

Gene: Acolyte_53 Start: 37597, Stop: 37325, Start Num: 61

Candidate Starts for Acolyte_53:

(Start: 61 @37597 has 111 MA's), (Start: 77 @37588 has 2 MA's), (81, 37576), (82, 37570), (85, 37534), (91, 37492), (100, 37447),

Gene: Adzzy_59 Start: 37247, Stop: 36975, Start Num: 61

Candidate Starts for Adzzy_59:

(Start: 61 @37247 has 111 MA's), (85, 37184), (92, 37136), (100, 37097), (103, 37085), (107, 37067),

Gene: Agape74_60 Start: 38769, Stop: 38497, Start Num: 61

Candidate Starts for Agape74_60:

(Start: 61 @38769 has 111 MA's), (Start: 77 @38760 has 2 MA's), (81, 38748), (82, 38742), (100, 38619),

Gene: Albedo_36 Start: 25530, Stop: 25772, Start Num: 80

Candidate Starts for Albedo_36:

(Start: 80 @25530 has 56 MA's), (123, 25764),

Gene: Albright_34 Start: 24694, Stop: 24924, Start Num: 80

Candidate Starts for Albright_34:

(Start: 80 @24694 has 56 MA's),

Gene: Aliter_58 Start: 38153, Stop: 37881, Start Num: 61

Candidate Starts for Aliter_58:

(Start: 61 @38153 has 111 MA's), (Start: 77 @38144 has 2 MA's), (86, 38087), (90, 38051), (97, 38012), (104, 37985), (107, 37973),

Gene: Alleb_29 Start: 9182, Stop: 9436, Start Num: 78

Candidate Starts for Alleb_29:

(Start: 61 @9134 has 111 MA's), (71, 9167), (Start: 78 @9182 has 21 MA's), (84, 9227), (89, 9263), (108, 9350),

Gene: Alma_58 Start: 38528, Stop: 38256, Start Num: 61

Candidate Starts for Alma_58:

(Start: 61 @38528 has 111 MA's), (Start: 77 @38519 has 2 MA's), (86, 38462), (90, 38426), (97, 38387), (104, 38360), (107, 38348),

Gene: Anaysia_64 Start: 37667, Stop: 37398, Start Num: 73

Candidate Starts for Anaysia_64:

(5, 38111), (7, 38087), (12, 38009), (Start: 73 @37667 has 20 MA's), (107, 37490), (115, 37451),

Gene: Aneem_58 Start: 37786, Stop: 37514, Start Num: 61

Candidate Starts for Aneem_58:

(Start: 61 @37786 has 111 MA's), (Start: 77 @37777 has 2 MA's), (107, 37606),

Gene: AnnaLie_37 Start: 25815, Stop: 26045, Start Num: 80

Candidate Starts for AnnaLie_37:

(Start: 80 @25815 has 56 MA's),

Gene: Anon_61 Start: 37216, Stop: 36947, Start Num: 73

Candidate Starts for Anon_61:

(Start: 73 @37216 has 20 MA's), (98, 37075), (113, 37018), (119, 36982),

Gene: Anselm_59 Start: 38676, Stop: 38404, Start Num: 61

Candidate Starts for Anselm_59:

(Start: 61 @38676 has 111 MA's), (Start: 77 @38667 has 2 MA's), (81, 38655), (82, 38649), (100, 38526), (107, 38496),

Gene: Anthony_54 Start: 36233, Stop: 35961, Start Num: 62

Candidate Starts for Anthony_54:

(Start: 62 @36233 has 7 MA's), (Start: 77 @36224 has 2 MA's), (82, 36206), (83, 36185), (107, 36053),

Gene: Arissanae_57 Start: 38844, Stop: 38572, Start Num: 61

Candidate Starts for Arissanae_57:

(Start: 61 @38844 has 111 MA's), (Start: 77 @38835 has 2 MA's), (85, 38781), (90, 38742), (100, 38694),

Gene: Armstrong_33 Start: 23408, Stop: 23647, Start Num: 75

Candidate Starts for Armstrong_33:

(24, 23165), (29, 23195), (Start: 75 @23408 has 7 MA's), (Start: 80 @23417 has 56 MA's), (91, 23504), (117, 23609), (123, 23639),

Gene: Arroyo_37 Start: 25853, Stop: 26083, Start Num: 80

Candidate Starts for Arroyo_37:

(Start: 80 @25853 has 56 MA's),

Gene: AvGardian_38 Start: 25976, Stop: 26215, Start Num: 80

Candidate Starts for AvGardian_38:

(57, 25892), (Start: 75 @25967 has 7 MA's), (Start: 80 @25976 has 56 MA's), (91, 26063),

Gene: Avocadoman_35 Start: 24931, Stop: 25161, Start Num: 80

Candidate Starts for Avocadoman_35:

(Start: 80 @24931 has 56 MA's),

Gene: BAjuniper_35 Start: 26652, Stop: 26891, Start Num: 80
Candidate Starts for BAjuniper_35:
(Start: 80 @26652 has 56 MA's), (84, 26694), (102, 26793), (105, 26799), (109, 26814), (117, 26844),

Gene: BabyDaisy_35 Start: 25454, Stop: 25684, Start Num: 80
Candidate Starts for BabyDaisy_35:
(41, 25325), (43, 25328), (47, 25343), (53, 25358), (54, 25361), (57, 25370), (Start: 75 @25445 has 7 MA's), (Start: 80 @25454 has 56 MA's), (102, 25595),

Gene: BabyYoda_37 Start: 26596, Stop: 26829, Start Num: 80
Candidate Starts for BabyYoda_37:
(57, 26512), (Start: 75 @26587 has 7 MA's), (Start: 80 @26596 has 56 MA's),

Gene: Bachome_59 Start: 37766, Stop: 37494, Start Num: 61
Candidate Starts for Bachome_59:
(Start: 61 @37766 has 111 MA's), (Start: 77 @37757 has 2 MA's), (100, 37616),

Gene: BaileyBlu_34 Start: 24331, Stop: 24588, Start Num: 76
Candidate Starts for BaileyBlu_34:
(34, 24157), (36, 24166), (Start: 76 @24331 has 1 MA's), (102, 24487), (114, 24529), (116, 24535),

Gene: Battleship_66 Start: 37873, Stop: 37604, Start Num: 73
Candidate Starts for Battleship_66:
(5, 38317), (12, 38215), (Start: 73 @37873 has 20 MA's), (107, 37696),

Gene: Beemo_58 Start: 38323, Stop: 38051, Start Num: 61
Candidate Starts for Beemo_58:
(Start: 61 @38323 has 111 MA's), (Start: 77 @38314 has 2 MA's), (86, 38257), (90, 38221), (97, 38182), (104, 38155), (107, 38143),

Gene: BelmontSKP_37 Start: 25815, Stop: 26045, Start Num: 80
Candidate Starts for BelmontSKP_37:
(Start: 80 @25815 has 56 MA's),

Gene: Benvolio_55 Start: 37700, Stop: 37428, Start Num: 61
Candidate Starts for Benvolio_55:
(Start: 61 @37700 has 111 MA's), (Start: 77 @37691 has 2 MA's), (81, 37679), (82, 37673), (100, 37550),

Gene: Bernstein_33 Start: 23463, Stop: 23702, Start Num: 75
Candidate Starts for Bernstein_33:
(24, 23220), (29, 23250), (Start: 75 @23463 has 7 MA's), (Start: 80 @23472 has 56 MA's), (91, 23559), (117, 23664), (123, 23694),

Gene: Big4_20 Start: 8933, Stop: 9163, Start Num: 80
Candidate Starts for Big4_20:
(Start: 80 @8933 has 56 MA's), (88, 9005), (124, 9152),

Gene: Big4_346 Start: 183627, Stop: 183857, Start Num: 80
Candidate Starts for Big4_346:
(Start: 80 @183627 has 56 MA's), (88, 183699), (124, 183846),

Gene: BobSwaget_54 Start: 37176, Stop: 36904, Start Num: 61
Candidate Starts for BobSwaget_54:
(Start: 61 @37176 has 111 MA's), (82, 37149), (100, 37026), (107, 36996),

Gene: BogosyJay_57 Start: 38245, Stop: 37973, Start Num: 61
Candidate Starts for BogosyJay_57:
(Start: 61 @38245 has 111 MA's), (Start: 77 @38236 has 2 MA's), (86, 38179), (90, 38143), (107, 38065),

Gene: Boohoo_64 Start: 37667, Stop: 37398, Start Num: 73
Candidate Starts for Boohoo_64:
(5, 38111), (7, 38087), (12, 38009), (Start: 73 @37667 has 20 MA's), (107, 37490), (115, 37451),

Gene: Bowtie_58 Start: 37793, Stop: 37521, Start Num: 61
Candidate Starts for Bowtie_58:
(Start: 61 @37793 has 111 MA's), (Start: 77 @37784 has 2 MA's), (107, 37613),

Gene: Brahms_33 Start: 23410, Stop: 23649, Start Num: 75
Candidate Starts for Brahms_33:
(24, 23167), (29, 23197), (Start: 75 @23410 has 7 MA's), (Start: 80 @23419 has 56 MA's), (91, 23506), (117, 23611), (123, 23641),

Gene: BubbaBear_35 Start: 25387, Stop: 25617, Start Num: 80
Candidate Starts for BubbaBear_35:
(Start: 80 @25387 has 56 MA's),

Gene: Bud_57 Start: 37340, Stop: 37068, Start Num: 61
Candidate Starts for Bud_57:
(Start: 61 @37340 has 111 MA's), (Start: 77 @37331 has 2 MA's), (107, 37160),

Gene: Buggy_60 Start: 38826, Stop: 38554, Start Num: 61
Candidate Starts for Buggy_60:
(20, 39066), (26, 39027), (Start: 61 @38826 has 111 MA's), (Start: 77 @38817 has 2 MA's), (81, 38805), (82, 38799), (100, 38676),

Gene: Buldak_34 Start: 24254, Stop: 24493, Start Num: 80
Candidate Starts for Buldak_34:
(1, 23414), (2, 23633), (17, 23939), (64, 24218), (Start: 80 @24254 has 56 MA's), (91, 24341),

Gene: Burritobowl_36 Start: 25388, Stop: 25618, Start Num: 80
Candidate Starts for Burritobowl_36:
(Start: 80 @25388 has 56 MA's),

Gene: C3_56 Start: 38705, Stop: 38394, Start Num: 58
Candidate Starts for C3_56:
(Start: 58 @38705 has 4 MA's), (Start: 62 @38666 has 7 MA's), (Start: 77 @38657 has 2 MA's), (90, 38564), (100, 38516), (107, 38486),

Gene: CallinAllBarbz_34 Start: 24734, Stop: 24985, Start Num: 77
Candidate Starts for CallinAllBarbz_34:
(Start: 77 @24734 has 2 MA's), (90, 24827), (116, 24932),

Gene: Caraxes_58 Start: 36944, Stop: 36672, Start Num: 61

Candidate Starts for Caraxes_58:
(Start: 61 @36944 has 111 MA's), (82, 36917), (100, 36794), (103, 36782),

Gene: Cashington_34 Start: 24734, Stop: 24964, Start Num: 80
Candidate Starts for Cashington_34:
(Start: 80 @24734 has 56 MA's), (102, 24875),

Gene: Catalina_59 Start: 38226, Stop: 37954, Start Num: 61
Candidate Starts for Catalina_59:
(Start: 61 @38226 has 111 MA's), (Start: 77 @38217 has 2 MA's), (86, 38160), (90, 38124), (97, 38085), (104, 38058), (107, 38046),

Gene: Celaena_34 Start: 26364, Stop: 26594, Start Num: 80
Candidate Starts for Celaena_34:
(42, 26235), (44, 26244), (45, 26250), (51, 26259), (55, 26271), (56, 26277), (60, 26289), (Start: 75 @26355 has 7 MA's), (Start: 80 @26364 has 56 MA's), (91, 26451), (102, 26505), (117, 26556),

Gene: Charm_56 Start: 38090, Stop: 37818, Start Num: 61
Candidate Starts for Charm_56:
(Start: 61 @38090 has 111 MA's), (86, 38024), (90, 37988), (104, 37922), (107, 37910), (109, 37901),

Gene: Che12_59 Start: 37385, Stop: 37113, Start Num: 61
Candidate Starts for Che12_59:
(Start: 61 @37385 has 111 MA's), (82, 37358), (85, 37322), (92, 37274), (100, 37235), (103, 37223), (107, 37205),

Gene: ChiliPepper_33 Start: 25809, Stop: 26048, Start Num: 75
Candidate Starts for ChiliPepper_33:
(9, 25398), (13, 25461), (14, 25479), (16, 25500), (18, 25509), (19, 25533), (22, 25551), (23, 25557), (27, 25584), (28, 25587), (31, 25608), (32, 25611), (33, 25638), (35, 25650), (37, 25665), (40, 25680), (42, 25689), (44, 25698), (45, 25704), (51, 25713), (55, 25725), (56, 25731), (Start: 75 @25809 has 7 MA's), (Start: 80 @25818 has 56 MA's), (88, 25890), (91, 25905), (102, 25959), (117, 26010), (123, 26040),

Gene: ChipMunk_60 Start: 40026, Stop: 39754, Start Num: 61
Candidate Starts for ChipMunk_60:
(Start: 61 @40026 has 111 MA's), (Start: 77 @40017 has 2 MA's), (81, 40005), (82, 39999), (100, 39876),

Gene: Clayda5_34 Start: 23406, Stop: 23636, Start Num: 80
Candidate Starts for Clayda5_34:
(24, 23154), (29, 23184), (Start: 75 @23397 has 7 MA's), (Start: 80 @23406 has 56 MA's), (91, 23493), (117, 23598), (123, 23628),

Gene: Coltrane_33 Start: 23410, Stop: 23649, Start Num: 75
Candidate Starts for Coltrane_33:
(24, 23167), (29, 23197), (Start: 75 @23410 has 7 MA's), (Start: 80 @23419 has 56 MA's), (91, 23506), (117, 23611), (123, 23641),

Gene: Conquerage_58 Start: 38297, Stop: 38025, Start Num: 61
Candidate Starts for Conquerage_58:
(Start: 61 @38297 has 111 MA's), (Start: 77 @38288 has 2 MA's), (86, 38231), (90, 38195), (97, 38156), (104, 38129), (107, 38117),

Gene: CroZenni_36 Start: 25278, Stop: 25508, Start Num: 80

Candidate Starts for CroZenni_36:

(41, 25149), (43, 25152), (49, 25170), (53, 25182), (54, 25185), (57, 25194), (59, 25197), (Start: 75 @25269 has 7 MA's), (Start: 80 @25278 has 56 MA's),

Gene: Crucio_58 Start: 38443, Stop: 38171, Start Num: 61

Candidate Starts for Crucio_58:

(Start: 61 @38443 has 111 MA's), (Start: 77 @38434 has 2 MA's), (81, 38422), (82, 38416), (100, 38293),

Gene: D29_56 Start: 38269, Stop: 37997, Start Num: 61

Candidate Starts for D29_56:

(Start: 61 @38269 has 111 MA's), (Start: 77 @38260 has 2 MA's), (90, 38167), (107, 38089), (118, 38035),

Gene: D32_59 Start: 38269, Stop: 37997, Start Num: 61

Candidate Starts for D32_59:

(Start: 61 @38269 has 111 MA's), (Start: 77 @38260 has 2 MA's), (90, 38167), (107, 38089), (118, 38035),

Gene: DBQu4n_60 Start: 38250, Stop: 37978, Start Num: 61

Candidate Starts for DBQu4n_60:

(Start: 61 @38250 has 111 MA's), (Start: 77 @38241 has 2 MA's), (90, 38148), (107, 38070), (118, 38016),

Gene: Dalmatian_59 Start: 38649, Stop: 38377, Start Num: 61

Candidate Starts for Dalmatian_59:

(Start: 61 @38649 has 111 MA's), (Start: 77 @38640 has 2 MA's), (81, 38628), (82, 38622), (100, 38499), (107, 38469),

Gene: Darrell_60 Start: 38922, Stop: 38650, Start Num: 61

Candidate Starts for Darrell_60:

(Start: 61 @38922 has 111 MA's), (Start: 77 @38913 has 2 MA's), (86, 38856), (90, 38820), (100, 38772), (110, 38730),

Gene: DARTHPhader_54 Start: 39183, Stop: 38911, Start Num: 62

Candidate Starts for DARTHPhader_54:

(Start: 62 @39183 has 7 MA's), (Start: 77 @39174 has 2 MA's), (90, 39081), (100, 39033), (105, 39009), (107, 39003),

Gene: DejaVu_31 Start: 9377, Stop: 9625, Start Num: 78

Candidate Starts for DejaVu_31:

(Start: 63 @9338 has 1 MA's), (Start: 78 @9377 has 21 MA's), (84, 9422), (89, 9458), (121, 9605),

Gene: DekHockey33_65 Start: 37959, Stop: 37690, Start Num: 73

Candidate Starts for DekHockey33_65:

(5, 38403), (12, 38301), (Start: 73 @37959 has 20 MA's), (107, 37782),

Gene: DickRichards_35 Start: 25717, Stop: 25947, Start Num: 80

Candidate Starts for DickRichards_35:

(Start: 80 @25717 has 56 MA's),

Gene: Didgeridoo_38 Start: 25851, Stop: 26093, Start Num: 80
Candidate Starts for Didgeridoo_38:
(Start: 80 @25851 has 56 MA's), (102, 25992),

Gene: Dignity_60 Start: 38849, Stop: 38577, Start Num: 61
Candidate Starts for Dignity_60:
(Start: 61 @38849 has 111 MA's), (Start: 77 @38840 has 2 MA's), (81, 38828), (82, 38822), (100, 38699),

Gene: DirtyBubble_36 Start: 26244, Stop: 26477, Start Num: 80
Candidate Starts for DirtyBubble_36:
(41, 26115), (43, 26118), (49, 26136), (53, 26148), (54, 26151), (57, 26160), (Start: 75 @26235 has 7 MA's), (Start: 80 @26244 has 56 MA's), (106, 26394),

Gene: Dismas_34 Start: 25989, Stop: 26219, Start Num: 80
Candidate Starts for Dismas_34:
(9, 25569), (13, 25632), (14, 25650), (16, 25671), (18, 25680), (19, 25704), (22, 25722), (23, 25728), (27, 25755), (28, 25758), (31, 25779), (33, 25809), (35, 25821), (37, 25836), (40, 25851), (42, 25860), (44, 25869), (45, 25875), (51, 25884), (55, 25896), (56, 25902), (Start: 75 @25980 has 7 MA's), (Start: 80 @25989 has 56 MA's), (88, 26061), (91, 26076), (102, 26130), (117, 26181), (123, 26211),

Gene: Doobus_35 Start: 25098, Stop: 25328, Start Num: 80
Candidate Starts for Doobus_35:
(Start: 80 @25098 has 56 MA's),

Gene: DreamTeam1_56 Start: 37922, Stop: 37650, Start Num: 61
Candidate Starts for DreamTeam1_56:
(Start: 61 @37922 has 111 MA's), (86, 37856), (90, 37820), (104, 37754), (107, 37742), (109, 37733),

Gene: DudeLittle_57 Start: 38415, Stop: 38143, Start Num: 61
Candidate Starts for DudeLittle_57:
(Start: 61 @38415 has 111 MA's), (Start: 77 @38406 has 2 MA's), (81, 38394), (82, 38388), (100, 38265), (107, 38235),

Gene: Duplo_60 Start: 38306, Stop: 38034, Start Num: 61
Candidate Starts for Duplo_60:
(Start: 61 @38306 has 111 MA's), (Start: 77 @38297 has 2 MA's), (90, 38204), (107, 38126), (118, 38072),

Gene: DustyDino_38 Start: 10938, Stop: 11192, Start Num: 78
Candidate Starts for DustyDino_38:
(70, 10923), (Start: 78 @10938 has 21 MA's), (84, 10983), (92, 11034), (95, 11052), (99, 11070),

Gene: EagleEye_60 Start: 38143, Stop: 37871, Start Num: 62
Candidate Starts for EagleEye_60:
(48, 38212), (Start: 62 @38143 has 7 MA's), (Start: 74 @38140 has 1 MA's), (Start: 77 @38134 has 2 MA's), (90, 38041), (98, 37999), (100, 37993), (107, 37963),

Gene: Ebony_57 Start: 37357, Stop: 37085, Start Num: 61
Candidate Starts for Ebony_57:
(Start: 61 @37357 has 111 MA's), (Start: 77 @37348 has 2 MA's), (107, 37177),

Gene: Echild_58 Start: 37724, Stop: 37452, Start Num: 61

Candidate Starts for Echild_58:

(Start: 61 @37724 has 111 MA's), (Start: 77 @37715 has 2 MA's), (81, 37703), (82, 37697), (100, 37574),

Gene: Eden_34 Start: 24202, Stop: 24432, Start Num: 80

Candidate Starts for Eden_34:

(66, 24169), (Start: 80 @24202 has 56 MA's), (102, 24343), (105, 24349), (109, 24364), (117, 24394), (123, 24424),

Gene: Eidsmoe_58 Start: 38289, Stop: 38017, Start Num: 61

Candidate Starts for Eidsmoe_58:

(Start: 61 @38289 has 111 MA's), (Start: 77 @38280 has 2 MA's), (86, 38223), (90, 38187), (97, 38148), (104, 38121), (107, 38109),

Gene: Elephantoon_57 Start: 37664, Stop: 37392, Start Num: 61

Candidate Starts for Elephantoon_57:

(Start: 61 @37664 has 111 MA's), (Start: 77 @37655 has 2 MA's), (86, 37598), (90, 37562), (97, 37523), (104, 37496), (107, 37484),

Gene: Elva_38 Start: 26309, Stop: 26539, Start Num: 80

Candidate Starts for Elva_38:

(41, 26177), (43, 26180), (47, 26195), (53, 26210), (54, 26213), (57, 26225), (Start: 75 @26300 has 7 MA's), (Start: 80 @26309 has 56 MA's),

Gene: EmyBug_55 Start: 38291, Stop: 38019, Start Num: 61

Candidate Starts for EmyBug_55:

(Start: 61 @38291 has 111 MA's), (Start: 77 @38282 has 2 MA's), (86, 38225), (90, 38189), (97, 38150), (104, 38123), (107, 38111),

Gene: Epsocamisio_61 Start: 37202, Stop: 36933, Start Num: 73

Candidate Starts for Epsocamisio_61:

(5, 37646), (7, 37622), (12, 37544), (Start: 73 @37202 has 20 MA's), (107, 37025),

Gene: Erenyeager_35 Start: 10332, Stop: 10586, Start Num: 78

Candidate Starts for Erenyeager_35:

(70, 10317), (Start: 78 @10332 has 21 MA's), (84, 10377), (92, 10428), (95, 10446), (99, 10464),

Gene: Et2Brutus_56 Start: 37320, Stop: 37048, Start Num: 61

Candidate Starts for Et2Brutus_56:

(Start: 61 @37320 has 111 MA's), (Start: 77 @37311 has 2 MA's), (107, 37140),

Gene: Eula_37 Start: 25477, Stop: 25719, Start Num: 80

Candidate Starts for Eula_37:

(Start: 80 @25477 has 56 MA's), (123, 25711),

Gene: EvilGenius_60 Start: 40027, Stop: 39755, Start Num: 61

Candidate Starts for EvilGenius_60:

(Start: 61 @40027 has 111 MA's), (Start: 77 @40018 has 2 MA's), (81, 40006), (82, 40000), (100, 39877),

Gene: Exile_31 Start: 26521, Stop: 26784, Start Num: 79

Candidate Starts for Exile_31:

(Start: 79 @26521 has 2 MA's), (116, 26719), (122, 26752),

Gene: ExplosioNervosa_58 Start: 38348, Stop: 38085, Start Num: 77

Candidate Starts for ExplosioNervosa_58:

(Start: 61 @38357 has 111 MA's), (Start: 77 @38348 has 2 MA's), (86, 38291), (90, 38255), (97, 38216), (104, 38189), (107, 38177),

Gene: Fameo_58 Start: 38774, Stop: 38502, Start Num: 61

Candidate Starts for Fameo_58:

(Start: 61 @38774 has 111 MA's), (Start: 77 @38765 has 2 MA's), (81, 38753), (82, 38747), (100, 38624), (107, 38594),

Gene: Fayely_58 Start: 38258, Stop: 37986, Start Num: 61

Candidate Starts for Fayely_58:

(Start: 61 @38258 has 111 MA's), (Start: 77 @38249 has 2 MA's), (86, 38192), (90, 38156), (97, 38117), (104, 38090), (107, 38078),

Gene: Fibonacci_57 Start: 37326, Stop: 37054, Start Num: 61

Candidate Starts for Fibonacci_57:

(Start: 61 @37326 has 111 MA's), (Start: 77 @37317 has 2 MA's), (107, 37146),

Gene: Finalfrontier_36 Start: 26101, Stop: 26331, Start Num: 80

Candidate Starts for Finalfrontier_36:

(Start: 80 @26101 has 56 MA's),

Gene: FiringLine_58 Start: 38424, Stop: 38152, Start Num: 61

Candidate Starts for FiringLine_58:

(Start: 61 @38424 has 111 MA's), (Start: 77 @38415 has 2 MA's), (81, 38403), (82, 38397), (100, 38274),

Gene: FlameThrower_34 Start: 25814, Stop: 26044, Start Num: 80

Candidate Starts for FlameThrower_34:

(42, 25685), (44, 25694), (45, 25700), (51, 25709), (55, 25721), (56, 25727), (60, 25739), (Start: 75 @25805 has 7 MA's), (Start: 80 @25814 has 56 MA's), (91, 25901), (96, 25928), (102, 25955), (117, 26006), (123, 26036),

Gene: Flaverint_58 Start: 37784, Stop: 37512, Start Num: 61

Candidate Starts for Flaverint_58:

(Start: 61 @37784 has 111 MA's), (Start: 77 @37775 has 2 MA's), (107, 37604),

Gene: Fork_31 Start: 9648, Stop: 9902, Start Num: 78

Candidate Starts for Fork_31:

(70, 9633), (Start: 78 @9648 has 21 MA's), (84, 9693), (92, 9744), (95, 9762), (99, 9780),

Gene: Franklin22_35 Start: 24188, Stop: 24418, Start Num: 80

Candidate Starts for Franklin22_35:

(3, 23681), (4, 23687), (8, 23756), (11, 23801), (21, 23906), (29, 23963), (36, 24020), (55, 24095), (57, 24104), (59, 24107), (Start: 80 @24188 has 56 MA's), (88, 24260), (102, 24329), (117, 24380), (123, 24410),

Gene: Georgie2_59 Start: 38469, Stop: 38197, Start Num: 61

Candidate Starts for Georgie2_59:

(Start: 61 @38469 has 111 MA's), (Start: 77 @38460 has 2 MA's), (81, 38448), (82, 38442),

Gene: Gilberta_58 Start: 37777, Stop: 37505, Start Num: 61
Candidate Starts for Gilberta_58:
(Start: 61 @37777 has 111 MA's), (Start: 77 @37768 has 2 MA's), (107, 37597),

Gene: Heffalump_57 Start: 39242, Stop: 38970, Start Num: 61
Candidate Starts for Heffalump_57:
(Start: 61 @39242 has 111 MA's), (Start: 77 @39233 has 2 MA's), (81, 39221), (82, 39215), (100, 39092), (107, 39062),

Gene: Herbertwm_56 Start: 38206, Stop: 37934, Start Num: 61
Candidate Starts for Herbertwm_56:
(26, 38407), (Start: 61 @38206 has 111 MA's), (Start: 77 @38197 has 2 MA's), (81, 38185), (84, 38146), (85, 38143), (91, 38101), (92, 38095), (100, 38056), (107, 38026),

Gene: HortumSL17_58 Start: 38225, Stop: 37953, Start Num: 61
Candidate Starts for HortumSL17_58:
(Start: 61 @38225 has 111 MA's), (Start: 77 @38216 has 2 MA's), (86, 38159), (90, 38123), (97, 38084), (104, 38057), (107, 38045),

Gene: Hortus1_28 Start: 9181, Stop: 9435, Start Num: 78
Candidate Starts for Hortus1_28:
(Start: 61 @9133 has 111 MA's), (71, 9166), (Start: 78 @9181 has 21 MA's), (84, 9226), (89, 9262), (108, 9349),

Gene: Hubbs_30 Start: 9589, Stop: 9837, Start Num: 78
Candidate Starts for Hubbs_30:
(Start: 63 @9550 has 1 MA's), (Start: 78 @9589 has 21 MA's), (84, 9634), (89, 9670), (121, 9817),

Gene: Hutc2_57 Start: 37326, Stop: 37054, Start Num: 61
Candidate Starts for Hutc2_57:
(Start: 61 @37326 has 111 MA's), (Start: 77 @37317 has 2 MA's), (107, 37146),

Gene: Icarian_41 Start: 26879, Stop: 27112, Start Num: 80
Candidate Starts for Icarian_41:
(41, 26750), (43, 26753), (49, 26771), (53, 26783), (54, 26786), (57, 26795), (Start: 75 @26870 has 7 MA's), (Start: 80 @26879 has 56 MA's), (84, 26921),

Gene: IndyLu_35 Start: 25415, Stop: 25645, Start Num: 80
Candidate Starts for IndyLu_35:
(41, 25286), (43, 25289), (49, 25307), (53, 25319), (54, 25322), (57, 25331), (Start: 75 @25406 has 7 MA's), (Start: 80 @25415 has 56 MA's), (102, 25556),

Gene: Insomnia_57 Start: 37837, Stop: 37565, Start Num: 61
Candidate Starts for Insomnia_57:
(Start: 61 @37837 has 111 MA's), (Start: 77 @37828 has 2 MA's), (107, 37657),

Gene: JSwag_63 Start: 37391, Stop: 37122, Start Num: 73
Candidate Starts for JSwag_63:
(5, 37835), (7, 37811), (12, 37733), (Start: 73 @37391 has 20 MA's), (107, 37214),

Gene: Jabith_58 Start: 37838, Stop: 37566, Start Num: 61
Candidate Starts for Jabith_58:
(Start: 61 @37838 has 111 MA's), (Start: 77 @37829 has 2 MA's), (107, 37658),

Gene: Jacko_31 Start: 9673, Stop: 9921, Start Num: 78
Candidate Starts for Jacko_31:
(Start: 78 @9673 has 21 MA's), (82, 9685), (84, 9718), (111, 9853),

Gene: Jerm_60 Start: 38841, Stop: 38569, Start Num: 61
Candidate Starts for Jerm_60:
(Start: 61 @38841 has 111 MA's), (Start: 77 @38832 has 2 MA's), (81, 38820), (82, 38814), (100, 38691),

Gene: Johnathan_35 Start: 24821, Stop: 25051, Start Num: 80
Candidate Starts for Johnathan_35:
(Start: 80 @24821 has 56 MA's),

Gene: Joselito_58 Start: 37786, Stop: 37514, Start Num: 61
Candidate Starts for Joselito_58:
(Start: 61 @37786 has 111 MA's), (Start: 77 @37777 has 2 MA's), (107, 37606),

Gene: Journey13_52 Start: 36811, Stop: 36539, Start Num: 61
Candidate Starts for Journey13_52:
(Start: 61 @36811 has 111 MA's), (Start: 77 @36802 has 2 MA's), (82, 36784), (92, 36700), (100, 36661), (107, 36631),

Gene: Jovita_37 Start: 25579, Stop: 25821, Start Num: 80
Candidate Starts for Jovita_37:
(Start: 80 @25579 has 56 MA's), (123, 25813),

Gene: Jsquared_56 Start: 37405, Stop: 37133, Start Num: 62
Candidate Starts for Jsquared_56:
(Start: 62 @37405 has 7 MA's), (81, 37384), (82, 37378), (100, 37255), (103, 37243),

Gene: KatherineG_64 Start: 37864, Stop: 37595, Start Num: 73
Candidate Starts for KatherineG_64:
(Start: 73 @37864 has 20 MA's), (107, 37687),

Gene: Katzastrophic_35 Start: 25943, Stop: 26173, Start Num: 80
Candidate Starts for Katzastrophic_35:
(42, 25814), (44, 25823), (45, 25829), (51, 25838), (55, 25850), (56, 25856), (60, 25868), (Start: 75 @25934 has 7 MA's), (Start: 80 @25943 has 56 MA's), (91, 26030), (102, 26084), (117, 26135), (123, 26165),

Gene: Kenzers_36 Start: 25402, Stop: 25644, Start Num: 80
Candidate Starts for Kenzers_36:
(Start: 80 @25402 has 56 MA's), (123, 25636),

Gene: Kerberos_60 Start: 38268, Stop: 37996, Start Num: 61
Candidate Starts for Kerberos_60:
(Start: 61 @38268 has 111 MA's), (Start: 77 @38259 has 2 MA's), (90, 38166), (107, 38088), (118, 38034),

Gene: Keziacharles14_58 Start: 39366, Stop: 39094, Start Num: 61
Candidate Starts for Keziacharles14_58:

(Start: 61 @39366 has 111 MA's), (Start: 77 @39357 has 2 MA's), (86, 39300), (90, 39264), (98, 39222),

Gene: Kieran_34 Start: 25998, Stop: 26228, Start Num: 80

Candidate Starts for Kieran_34:

(9, 25578), (13, 25641), (14, 25659), (16, 25680), (18, 25689), (19, 25713), (22, 25731), (23, 25737), (27, 25764), (28, 25767), (31, 25788), (32, 25791), (33, 25818), (35, 25830), (37, 25845), (40, 25860), (42, 25869), (44, 25878), (45, 25884), (51, 25893), (55, 25905), (56, 25911), (Start: 75 @25989 has 7 MA's), (Start: 80 @25998 has 56 MA's), (88, 26070), (91, 26085), (102, 26139), (117, 26190), (123, 26220),

Gene: KingCyrus_60 Start: 40022, Stop: 39750, Start Num: 61

Candidate Starts for KingCyrus_60:

(Start: 61 @40022 has 111 MA's), (Start: 77 @40013 has 2 MA's), (81, 40001), (82, 39995), (100, 39872),

Gene: Koduck_59 Start: 37723, Stop: 37412, Start Num: 61

Candidate Starts for Koduck_59:

(6, 38146), (20, 37963), (26, 37924), (Start: 61 @37723 has 111 MA's), (72, 37684), (82, 37657), (100, 37534), (103, 37522),

Gene: L5_56 Start: 37810, Stop: 37499, Start Num: 61

Candidate Starts for L5_56:

(6, 38233), (20, 38050), (26, 38011), (Start: 61 @37810 has 111 MA's), (72, 37771), (82, 37744), (100, 37621), (103, 37609),

Gene: Lahqtemish_35 Start: 25448, Stop: 25690, Start Num: 80

Candidate Starts for Lahqtemish_35:

(Start: 80 @25448 has 56 MA's), (102, 25589),

Gene: Larenn_57 Start: 38431, Stop: 38159, Start Num: 61

Candidate Starts for Larenn_57:

(Start: 61 @38431 has 111 MA's), (82, 38404), (85, 38368), (91, 38326), (100, 38281), (107, 38251), (109, 38242),

Gene: LastResort_62 Start: 37443, Stop: 37174, Start Num: 73

Candidate Starts for LastResort_62:

(5, 37887), (7, 37863), (12, 37785), (Start: 73 @37443 has 20 MA's), (107, 37266),

Gene: Leviathan_60 Start: 38898, Stop: 38626, Start Num: 61

Candidate Starts for Leviathan_60:

(Start: 61 @38898 has 111 MA's), (Start: 77 @38889 has 2 MA's), (81, 38877), (82, 38871), (100, 38748),

Gene: LilTurb_59 Start: 38722, Stop: 38450, Start Num: 61

Candidate Starts for LilTurb_59:

(Start: 61 @38722 has 111 MA's), (Start: 77 @38713 has 2 MA's), (81, 38701), (82, 38695), (100, 38572),

Gene: LimaBean_35 Start: 24870, Stop: 25100, Start Num: 80

Candidate Starts for LimaBean_35:

(Start: 80 @24870 has 56 MA's),

Gene: Lokk_55 Start: 37800, Stop: 37528, Start Num: 61
Candidate Starts for Lokk_55:
(Start: 61 @37800 has 111 MA's), (82, 37773), (100, 37650), (107, 37620),

Gene: LoneWolf_59 Start: 38258, Stop: 37986, Start Num: 61
Candidate Starts for LoneWolf_59:
(Start: 61 @38258 has 111 MA's), (Start: 77 @38249 has 2 MA's), (86, 38192), (90, 38156), (100, 38108), (107, 38078),

Gene: Looper_63 Start: 37355, Stop: 37086, Start Num: 73
Candidate Starts for Looper_63:
(5, 37799), (7, 37775), (12, 37697), (Start: 73 @37355 has 20 MA's), (107, 37178),

Gene: Loviatar_65 Start: 27431, Stop: 27664, Start Num: 80
Candidate Starts for Loviatar_65:
(41, 27302), (43, 27305), (49, 27323), (53, 27335), (54, 27338), (57, 27347), (Start: 75 @27422 has 7 MA's), (Start: 80 @27431 has 56 MA's), (84, 27473),

Gene: Lucivia_58 Start: 37835, Stop: 37563, Start Num: 61
Candidate Starts for Lucivia_58:
(Start: 61 @37835 has 111 MA's), (Start: 77 @37826 has 2 MA's), (107, 37655),

Gene: Lucyedi_59 Start: 38336, Stop: 38067, Start Num: 74
Candidate Starts for Lucyedi_59:
(48, 38408), (Start: 62 @38339 has 7 MA's), (Start: 74 @38336 has 1 MA's), (Start: 77 @38330 has 2 MA's), (90, 38237), (98, 38195), (100, 38189), (107, 38159),

Gene: Lupine_29 Start: 9261, Stop: 9509, Start Num: 78
Candidate Starts for Lupine_29:
(Start: 63 @9222 has 1 MA's), (Start: 78 @9261 has 21 MA's), (84, 9306), (89, 9342), (121, 9489),

Gene: Lyell_35 Start: 10250, Stop: 10504, Start Num: 78
Candidate Starts for Lyell_35:
(70, 10235), (Start: 78 @10250 has 21 MA's), (84, 10295), (92, 10346), (95, 10364), (99, 10382),

Gene: Lynlen_36 Start: 25402, Stop: 25644, Start Num: 80
Candidate Starts for Lynlen_36:
(Start: 80 @25402 has 56 MA's), (123, 25636),

Gene: MaCh_58 Start: 37765, Stop: 37493, Start Num: 61
Candidate Starts for MaCh_58:
(Start: 61 @37765 has 111 MA's), (Start: 77 @37756 has 2 MA's), (100, 37615),

Gene: Mabel_57 Start: 37367, Stop: 37095, Start Num: 61
Candidate Starts for Mabel_57:
(Start: 61 @37367 has 111 MA's), (Start: 77 @37358 has 2 MA's), (107, 37187),

Gene: Malec_58 Start: 38998, Stop: 38726, Start Num: 61
Candidate Starts for Malec_58:
(Start: 61 @38998 has 111 MA's), (82, 38971), (85, 38935), (91, 38893), (100, 38848), (107, 38818), (109, 38809),

Gene: Maminiaina_57 Start: 38227, Stop: 37955, Start Num: 61

Candidate Starts for Maminaiaina_57:

(Start: 61 @38227 has 111 MA's), (Start: 77 @38218 has 2 MA's), (86, 38161), (90, 38125), (107, 38047),

Gene: Miko_55 Start: 38578, Stop: 38306, Start Num: 61

Candidate Starts for Miko_55:

(26, 38779), (Start: 61 @38578 has 111 MA's), (82, 38551), (100, 38428), (107, 38398),

Gene: MinecraftSteve_64 Start: 37679, Stop: 37410, Start Num: 73

Candidate Starts for MinecraftSteve_64:

(Start: 73 @37679 has 20 MA's), (107, 37502),

Gene: MissWhite_57 Start: 36925, Stop: 36653, Start Num: 61

Candidate Starts for MissWhite_57:

(Start: 61 @36925 has 111 MA's), (Start: 77 @36916 has 2 MA's), (82, 36898), (107, 36745),

Gene: Mulciber_57 Start: 37323, Stop: 37051, Start Num: 61

Candidate Starts for Mulciber_57:

(Start: 61 @37323 has 111 MA's), (Start: 77 @37314 has 2 MA's), (107, 37143),

Gene: Munch_58 Start: 37786, Stop: 37514, Start Num: 61

Candidate Starts for Munch_58:

(Start: 61 @37786 has 111 MA's), (Start: 77 @37777 has 2 MA's), (107, 37606),

Gene: Musetta_35 Start: 10358, Stop: 10612, Start Num: 78

Candidate Starts for Musetta_35:

(70, 10343), (Start: 78 @10358 has 21 MA's), (84, 10403), (108, 10526),

Gene: Myxus_58 Start: 38225, Stop: 37953, Start Num: 61

Candidate Starts for Myxus_58:

(Start: 61 @38225 has 111 MA's), (Start: 77 @38216 has 2 MA's), (86, 38159), (90, 38123), (97, 38084), (104, 38057), (107, 38045),

Gene: Naji_60 Start: 38269, Stop: 37997, Start Num: 61

Candidate Starts for Naji_60:

(Start: 61 @38269 has 111 MA's), (Start: 77 @38260 has 2 MA's), (90, 38167), (107, 38089), (118, 38035),

Gene: Nebulosus_62 Start: 37439, Stop: 37170, Start Num: 73

Candidate Starts for Nebulosus_62:

(5, 37883), (7, 37859), (12, 37781), (Start: 73 @37439 has 20 MA's), (107, 37262), (115, 37223),

Gene: Necrophoxinus_37 Start: 10946, Stop: 11200, Start Num: 78

Candidate Starts for Necrophoxinus_37:

(70, 10931), (Start: 78 @10946 has 21 MA's), (84, 10991), (92, 11042), (95, 11060), (99, 11078),

Gene: Nedarya_60 Start: 37419, Stop: 37150, Start Num: 65

Candidate Starts for Nedarya_60:

(7, 37842), (Start: 65 @37419 has 1 MA's), (Start: 77 @37410 has 2 MA's), (82, 37392), (107, 37239),

Gene: Nicky22_37 Start: 25941, Stop: 26183, Start Num: 80

Candidate Starts for Nicky22_37:

(Start: 80 @25941 has 56 MA's), (123, 26175),

Gene: NothingSpecial_56 Start: 38807, Stop: 38535, Start Num: 61
Candidate Starts for NothingSpecial_56:
(Start: 61 @38807 has 111 MA's), (81, 38786), (82, 38780), (85, 38744), (91, 38702), (93, 38693),
(100, 38657), (107, 38627), (109, 38618), (110, 38615),

Gene: Odin_56 Start: 37328, Stop: 37056, Start Num: 61
Candidate Starts for Odin_56:
(Start: 61 @37328 has 111 MA's), (82, 37301), (100, 37178), (103, 37166),

Gene: OlinDD_28 Start: 9180, Stop: 9434, Start Num: 78
Candidate Starts for OlinDD_28:
(Start: 61 @9132 has 111 MA's), (71, 9165), (Start: 78 @9180 has 21 MA's), (84, 9225), (89, 9261),
(108, 9348),

Gene: Oofda_65 Start: 37642, Stop: 37373, Start Num: 73
Candidate Starts for Oofda_65:
(Start: 73 @37642 has 20 MA's), (107, 37465),

Gene: Orange_57 Start: 37335, Stop: 37063, Start Num: 61
Candidate Starts for Orange_57:
(Start: 61 @37335 has 111 MA's), (Start: 77 @37326 has 2 MA's), (107, 37155),

Gene: PackMan_57 Start: 38225, Stop: 37953, Start Num: 61
Candidate Starts for PackMan_57:
(Start: 61 @38225 has 111 MA's), (Start: 77 @38216 has 2 MA's), (86, 38159), (90, 38123), (97,
38084), (104, 38057), (107, 38045),

Gene: PainterBoy_59 Start: 38298, Stop: 38026, Start Num: 62
Candidate Starts for PainterBoy_59:
(48, 38367), (Start: 62 @38298 has 7 MA's), (Start: 77 @38289 has 2 MA's), (90, 38196), (100,
38148), (104, 38130), (107, 38118),

Gene: PauloDiaboli_375 Start: 183665, Stop: 183895, Start Num: 80
Candidate Starts for PauloDiaboli_375:
(Start: 80 @183665 has 56 MA's), (88, 183737), (96, 183779), (120, 183866), (124, 183884),

Gene: PauloDiaboli_20 Start: 7036, Stop: 7266, Start Num: 80
Candidate Starts for PauloDiaboli_20:
(Start: 80 @7036 has 56 MA's), (88, 7108), (96, 7150), (120, 7237), (124, 7255),

Gene: Pavlo_29 Start: 9536, Stop: 9784, Start Num: 78
Candidate Starts for Pavlo_29:
(Start: 63 @9497 has 1 MA's), (Start: 78 @9536 has 21 MA's), (84, 9581), (89, 9617), (121, 9764),

Gene: Petersenfast_56 Start: 37334, Stop: 37062, Start Num: 61
Candidate Starts for Petersenfast_56:
(Start: 61 @37334 has 111 MA's), (Start: 77 @37325 has 2 MA's), (107, 37154),

Gene: Ph8s_59 Start: 37685, Stop: 37413, Start Num: 61
Candidate Starts for Ph8s_59:
(Start: 61 @37685 has 111 MA's), (85, 37622), (92, 37574), (100, 37535), (103, 37523), (107, 37505),

Gene: Phaeder_58 Start: 38225, Stop: 37953, Start Num: 61

Candidate Starts for Phaeder_58:

(Start: 61 @38225 has 111 MA's), (Start: 77 @38216 has 2 MA's), (86, 38159), (90, 38123), (97, 38084), (104, 38057), (107, 38045),

Gene: Pharaoh_53 Start: 38271, Stop: 37999, Start Num: 61

Candidate Starts for Pharaoh_53:

(26, 38472), (Start: 61 @38271 has 111 MA's), (Start: 77 @38262 has 2 MA's), (81, 38250), (85, 38208), (90, 38169), (100, 38121), (104, 38103), (107, 38091), (109, 38082),

Gene: PhillyPhilly_30 Start: 9402, Stop: 9689, Start Num: 63

Candidate Starts for PhillyPhilly_30:

(Start: 63 @9402 has 1 MA's), (Start: 78 @9441 has 21 MA's), (84, 9486), (89, 9522), (121, 9669),

Gene: Phisb_39 Start: 25535, Stop: 25777, Start Num: 80

Candidate Starts for Phisb_39:

(43, 25406), (50, 25427), (54, 25439), (55, 25442), (57, 25451), (59, 25454), (Start: 75 @25526 has 7 MA's), (Start: 80 @25535 has 56 MA's), (102, 25676),

Gene: Phlei_47 Start: 37907, Stop: 37635, Start Num: 61

Candidate Starts for Phlei_47:

(Start: 61 @37907 has 111 MA's), (Start: 77 @37898 has 2 MA's), (92, 37796), (100, 37757), (101, 37754), (118, 37673),

Gene: Phonnegut_58 Start: 38322, Stop: 38050, Start Num: 61

Candidate Starts for Phonnegut_58:

(Start: 61 @38322 has 111 MA's), (Start: 77 @38313 has 2 MA's), (86, 38256), (90, 38220), (97, 38181), (104, 38154), (107, 38142),

Gene: Pioneer_58 Start: 38322, Stop: 38050, Start Num: 61

Candidate Starts for Pioneer_58:

(Start: 61 @38322 has 111 MA's), (Start: 77 @38313 has 2 MA's), (86, 38256), (90, 38220), (97, 38181), (104, 38154), (107, 38142),

Gene: Pioneer3_28 Start: 9179, Stop: 9433, Start Num: 78

Candidate Starts for Pioneer3_28:

(Start: 61 @9131 has 111 MA's), (71, 9164), (Start: 78 @9179 has 21 MA's), (84, 9224), (89, 9260), (108, 9347),

Gene: Platte_28 Start: 8949, Stop: 9203, Start Num: 78

Candidate Starts for Platte_28:

(Start: 61 @8901 has 111 MA's), (71, 8934), (Start: 78 @8949 has 21 MA's), (84, 8994), (89, 9030), (108, 9117),

Gene: Pomar16_60 Start: 38309, Stop: 38037, Start Num: 61

Candidate Starts for Pomar16_60:

(Start: 61 @38309 has 111 MA's), (Start: 77 @38300 has 2 MA's), (90, 38207), (107, 38129), (118, 38075),

Gene: Power_57 Start: 38477, Stop: 38205, Start Num: 61

Candidate Starts for Power_57:

(Start: 61 @38477 has 111 MA's), (Start: 77 @38468 has 2 MA's), (81, 38456), (82, 38450), (100, 38327),

Gene: Priya_58 Start: 38292, Stop: 38020, Start Num: 61

Candidate Starts for Priya_58:

(Start: 61 @38292 has 111 MA's), (Start: 77 @38283 has 2 MA's), (86, 38226), (90, 38190), (97, 38151), (104, 38124), (107, 38112),

Gene: QMacho_38 Start: 25959, Stop: 26201, Start Num: 80

Candidate Starts for QMacho_38:

(Start: 80 @25959 has 56 MA's), (123, 26193),

Gene: Qobbit_58 Start: 38254, Stop: 37982, Start Num: 61

Candidate Starts for Qobbit_58:

(Start: 61 @38254 has 111 MA's), (Start: 77 @38245 has 2 MA's), (86, 38188), (90, 38152), (97, 38113), (104, 38086), (107, 38074),

Gene: QueenB2_57 Start: 38455, Stop: 38183, Start Num: 61

Candidate Starts for QueenB2_57:

(Start: 61 @38455 has 111 MA's), (Start: 77 @38446 has 2 MA's), (81, 38434), (82, 38428), (100, 38305), (107, 38275),

Gene: QueenBeesly_58 Start: 38424, Stop: 38152, Start Num: 61

Candidate Starts for QueenBeesly_58:

(Start: 61 @38424 has 111 MA's), (Start: 77 @38415 has 2 MA's), (81, 38403), (82, 38397), (100, 38274),

Gene: Quenya_35 Start: 25660, Stop: 25890, Start Num: 80

Candidate Starts for Quenya_35:

(9, 25243), (15, 25348), (25, 25423), (30, 25447), (33, 25486), (37, 25513), (38, 25516), (39, 25519), (56, 25576), (57, 25579), (60, 25585), (Start: 75 @25651 has 7 MA's), (Start: 80 @25660 has 56 MA's), (91, 25747), (102, 25801), (117, 25852), (123, 25882),

Gene: Rachaly_57 Start: 38723, Stop: 38451, Start Num: 61

Candidate Starts for Rachaly_57:

(Start: 61 @38723 has 111 MA's), (82, 38696), (100, 38573), (107, 38543),

Gene: Rahalelujah_58 Start: 37998, Stop: 37726, Start Num: 61

Candidate Starts for Rahalelujah_58:

(Start: 61 @37998 has 111 MA's), (Start: 77 @37989 has 2 MA's), (86, 37932), (90, 37896), (100, 37848),

Gene: ReMo_62 Start: 37440, Stop: 37171, Start Num: 73

Candidate Starts for ReMo_62:

(5, 37884), (7, 37860), (12, 37782), (Start: 73 @37440 has 20 MA's), (107, 37263),

Gene: Refuge_56 Start: 39539, Stop: 39267, Start Num: 69

Candidate Starts for Refuge_56:

(Start: 61 @39569 has 111 MA's), (Start: 69 @39539 has 2 MA's), (90, 39437), (100, 39389), (104, 39371), (107, 39359),

Gene: Remus_64 Start: 37446, Stop: 37177, Start Num: 73

Candidate Starts for Remus_64:

(5, 37890), (7, 37866), (12, 37788), (Start: 73 @37446 has 20 MA's), (107, 37269),

Gene: Retro23_59 Start: 38669, Stop: 38397, Start Num: 61
Candidate Starts for Retro23_59:
(Start: 61 @38669 has 111 MA's), (Start: 77 @38660 has 2 MA's), (81, 38648), (82, 38642), (100, 38519), (107, 38489),

Gene: Rollins_33 Start: 23463, Stop: 23702, Start Num: 75
Candidate Starts for Rollins_33:
(24, 23220), (29, 23250), (Start: 75 @23463 has 7 MA's), (Start: 80 @23472 has 56 MA's), (91, 23559), (117, 23664), (123, 23694),

Gene: Roman_30 Start: 9436, Stop: 9684, Start Num: 78
Candidate Starts for Roman_30:
(Start: 63 @9397 has 1 MA's), (Start: 78 @9436 has 21 MA's), (84, 9481), (89, 9517), (121, 9664),

Gene: Rona_34 Start: 25980, Stop: 26210, Start Num: 80
Candidate Starts for Rona_34:
(9, 25560), (13, 25623), (14, 25641), (16, 25662), (18, 25671), (19, 25695), (22, 25713), (23, 25719), (27, 25746), (28, 25749), (31, 25770), (32, 25773), (35, 25812), (37, 25827), (40, 25842), (42, 25851), (44, 25860), (45, 25866), (51, 25875), (55, 25887), (56, 25893), (Start: 75 @25971 has 7 MA's), (Start: 80 @25980 has 56 MA's), (88, 26052), (91, 26067), (117, 26172), (123, 26202),

Gene: Rosalind_62 Start: 37598, Stop: 37329, Start Num: 73
Candidate Starts for Rosalind_62:
(5, 38042), (7, 38018), (12, 37940), (Start: 73 @37598 has 20 MA's), (107, 37421),

Gene: RunningBrook_37 Start: 10938, Stop: 11192, Start Num: 78
Candidate Starts for RunningBrook_37:
(70, 10923), (Start: 78 @10938 has 21 MA's), (84, 10983), (92, 11034), (95, 11052), (99, 11070),

Gene: Salz_56 Start: 37305, Stop: 37033, Start Num: 61
Candidate Starts for Salz_56:
(Start: 61 @37305 has 111 MA's), (Start: 77 @37296 has 2 MA's), (107, 37125),

Gene: SanaSana_39 Start: 27081, Stop: 27314, Start Num: 80
Candidate Starts for SanaSana_39:
(41, 26952), (43, 26955), (49, 26973), (53, 26985), (54, 26988), (57, 26997), (Start: 75 @27072 has 7 MA's), (Start: 80 @27081 has 56 MA's), (101, 27216), (118, 27282),

Gene: SansAfet_37 Start: 25401, Stop: 25631, Start Num: 80
Candidate Starts for SansAfet_37:
(Start: 80 @25401 has 56 MA's),

Gene: SarBear_36 Start: 25256, Stop: 25498, Start Num: 80
Candidate Starts for SarBear_36:
(Start: 80 @25256 has 56 MA's), (123, 25490),

Gene: Scherzo_58 Start: 38511, Stop: 38239, Start Num: 61
Candidate Starts for Scherzo_58:
(Start: 61 @38511 has 111 MA's), (Start: 77 @38502 has 2 MA's), (86, 38445), (90, 38409), (97, 38370), (104, 38343), (107, 38331),

Gene: SemperFi_59 Start: 38692, Stop: 38420, Start Num: 61
Candidate Starts for SemperFi_59:

(Start: 61 @38692 has 111 MA's), (Start: 77 @38683 has 2 MA's), (81, 38671), (82, 38665), (100, 38542),

Gene: Serenity_58 Start: 37628, Stop: 37356, Start Num: 62

Candidate Starts for Serenity_58:

(46, 37700), (52, 37688), (Start: 62 @37628 has 7 MA's), (81, 37607), (82, 37601), (100, 37478), (103, 37466),

Gene: Sham4_57 Start: 37333, Stop: 37061, Start Num: 61

Candidate Starts for Sham4_57:

(Start: 61 @37333 has 111 MA's), (Start: 77 @37324 has 2 MA's), (107, 37153),

Gene: Sharkboy_35 Start: 26070, Stop: 26309, Start Num: 75

Candidate Starts for Sharkboy_35:

(9, 25659), (13, 25722), (14, 25740), (16, 25761), (18, 25770), (19, 25794), (22, 25812), (23, 25818), (27, 25845), (28, 25848), (31, 25869), (32, 25872), (33, 25899), (35, 25911), (37, 25926), (40, 25941), (42, 25950), (44, 25959), (45, 25965), (51, 25974), (55, 25986), (56, 25992), (Start: 75 @26070 has 7 MA's), (Start: 80 @26079 has 56 MA's), (88, 26151), (91, 26166), (102, 26220), (117, 26271), (123, 26301),

Gene: ShayRa_64 Start: 37627, Stop: 37358, Start Num: 73

Candidate Starts for ShayRa_64:

(5, 38071), (12, 37969), (Start: 73 @37627 has 20 MA's), (107, 37450),

Gene: SheaKeira_56 Start: 37935, Stop: 37663, Start Num: 61

Candidate Starts for SheaKeira_56:

(Start: 61 @37935 has 111 MA's), (Start: 77 @37926 has 2 MA's), (81, 37914), (86, 37869), (90, 37833), (94, 37812), (100, 37785), (102, 37776), (105, 37761), (117, 37710), (121, 37689),

Gene: Skylord_33 Start: 23403, Stop: 23633, Start Num: 80

Candidate Starts for Skylord_33:

(24, 23151), (29, 23181), (Start: 75 @23394 has 7 MA's), (Start: 80 @23403 has 56 MA's), (91, 23490), (117, 23595), (123, 23625),

Gene: Slay_37 Start: 25937, Stop: 26179, Start Num: 80

Candidate Starts for Slay_37:

(Start: 80 @25937 has 56 MA's), (123, 26171),

Gene: Smeagan_61 Start: 38985, Stop: 38713, Start Num: 61

Candidate Starts for Smeagan_61:

(Start: 61 @38985 has 111 MA's), (Start: 77 @38976 has 2 MA's), (81, 38964), (82, 38958), (100, 38835),

Gene: SnapTap_58 Start: 38503, Stop: 38231, Start Num: 61

Candidate Starts for SnapTap_58:

(Start: 61 @38503 has 111 MA's), (Start: 77 @38494 has 2 MA's), (81, 38482), (82, 38476), (100, 38353),

Gene: Snape_57 Start: 37325, Stop: 37053, Start Num: 61

Candidate Starts for Snape_57:

(Start: 61 @37325 has 111 MA's), (Start: 77 @37316 has 2 MA's), (107, 37145),

Gene: Soondubu_31 Start: 26525, Stop: 26788, Start Num: 79

Candidate Starts for Soondubu_31:
(Start: 79 @26525 has 2 MA's), (116, 26723), (122, 26756),

Gene: Soups_64 Start: 37890, Stop: 37621, Start Num: 73
Candidate Starts for Soups_64:
(5, 38334), (12, 38232), (Start: 73 @37890 has 20 MA's), (107, 37713),

Gene: Spouty_56 Start: 38291, Stop: 38019, Start Num: 61
Candidate Starts for Spouty_56:
(Start: 61 @38291 has 111 MA's), (Start: 77 @38282 has 2 MA's), (86, 38225), (90, 38189), (97, 38150), (104, 38123), (107, 38111),

Gene: StarStuff_60 Start: 38271, Stop: 37999, Start Num: 61
Candidate Starts for StarStuff_60:
(Start: 61 @38271 has 111 MA's), (Start: 77 @38262 has 2 MA's), (90, 38169), (107, 38091), (118, 38037),

Gene: Steamy_54 Start: 38003, Stop: 37731, Start Num: 61
Candidate Starts for Steamy_54:
(26, 38204), (Start: 61 @38003 has 111 MA's), (Start: 77 @37994 has 2 MA's), (82, 37976), (85, 37940), (90, 37901), (100, 37853), (104, 37835), (109, 37814), (110, 37811),

Gene: StevieWelch_35 Start: 10338, Stop: 10592, Start Num: 78
Candidate Starts for StevieWelch_35:
(70, 10323), (Start: 78 @10338 has 21 MA's), (84, 10383), (95, 10452), (99, 10470),

Gene: Stoor_37 Start: 26750, Stop: 26983, Start Num: 80
Candidate Starts for Stoor_37:
(41, 26621), (43, 26624), (49, 26642), (54, 26657), (57, 26666), (Start: 75 @26741 has 7 MA's), (Start: 80 @26750 has 56 MA's),

Gene: Stromboli_37 Start: 26614, Stop: 26847, Start Num: 80
Candidate Starts for Stromboli_37:
(41, 26485), (43, 26488), (49, 26506), (53, 26518), (54, 26521), (57, 26530), (Start: 75 @26605 has 7 MA's), (Start: 80 @26614 has 56 MA's), (106, 26764),

Gene: Strosahl_64 Start: 37446, Stop: 37177, Start Num: 73
Candidate Starts for Strosahl_64:
(5, 37890), (7, 37866), (12, 37788), (Start: 73 @37446 has 20 MA's), (107, 37269),

Gene: Superchunk_56 Start: 36944, Stop: 36672, Start Num: 61
Candidate Starts for Superchunk_56:
(Start: 61 @36944 has 111 MA's), (82, 36917), (100, 36794), (103, 36782),

Gene: SweetiePie_58 Start: 38635, Stop: 38363, Start Num: 61
Candidate Starts for SweetiePie_58:
(Start: 61 @38635 has 111 MA's), (Start: 77 @38626 has 2 MA's), (81, 38614), (82, 38608),

Gene: Swervy_37 Start: 25456, Stop: 25698, Start Num: 80
Candidate Starts for Swervy_37:
(Start: 80 @25456 has 56 MA's), (123, 25690),

Gene: SwirlSquare_63 Start: 37866, Stop: 37594, Start Num: 61

Candidate Starts for SwirlSquare_63:
(Start: 61 @37866 has 111 MA's), (82, 37839), (87, 37791), (96, 37734), (107, 37686), (112, 37668),

Gene: Switzerland_63 Start: 37766, Stop: 37497, Start Num: 73
Candidate Starts for Switzerland_63:
(5, 38210), (12, 38108), (Start: 73 @37766 has 20 MA's), (107, 37589),

Gene: Tandem_28 Start: 9118, Stop: 9372, Start Num: 78
Candidate Starts for Tandem_28:
(Start: 61 @9070 has 111 MA's), (71, 9103), (Start: 78 @9118 has 21 MA's), (84, 9163), (89, 9199),
(108, 9286),

Gene: Timothy_57 Start: 37302, Stop: 37030, Start Num: 61
Candidate Starts for Timothy_57:
(Start: 61 @37302 has 111 MA's), (Start: 77 @37293 has 2 MA's), (107, 37122),

Gene: TinyTimmy_56 Start: 37351, Stop: 37079, Start Num: 61
Candidate Starts for TinyTimmy_56:
(Start: 61 @37351 has 111 MA's), (Start: 77 @37342 has 2 MA's), (107, 37171),

Gene: TopsytheTRex_54 Start: 37698, Stop: 37426, Start Num: 62
Candidate Starts for TopsytheTRex_54:
(46, 37770), (52, 37758), (Start: 62 @37698 has 7 MA's), (81, 37677), (82, 37671), (100, 37548), (103,
37536),

Gene: Toaka_58 Start: 38206, Stop: 37934, Start Num: 61
Candidate Starts for Toaka_58:
(Start: 61 @38206 has 111 MA's), (Start: 77 @38197 has 2 MA's), (100, 38056), (104, 38038),

Gene: Tomathan_60 Start: 38318, Stop: 38046, Start Num: 61
Candidate Starts for Tomathan_60:
(Start: 61 @38318 has 111 MA's), (Start: 77 @38309 has 2 MA's), (90, 38216), (107, 38138), (118,
38084),

Gene: Tubs_58 Start: 38225, Stop: 37953, Start Num: 61
Candidate Starts for Tubs_58:
(Start: 61 @38225 has 111 MA's), (Start: 77 @38216 has 2 MA's), (86, 38159), (90, 38123), (97,
38084), (104, 38057), (107, 38045),

Gene: TukTuk_37 Start: 25527, Stop: 25769, Start Num: 80
Candidate Starts for TukTuk_37:
(Start: 80 @25527 has 56 MA's), (102, 25668),

Gene: Turbido_59 Start: 38719, Stop: 38447, Start Num: 61
Candidate Starts for Turbido_59:
(Start: 61 @38719 has 111 MA's), (Start: 77 @38710 has 2 MA's), (81, 38698), (82, 38692),

Gene: Ugenie5_55 Start: 38510, Stop: 38238, Start Num: 61
Candidate Starts for Ugenie5_55:
(Start: 61 @38510 has 111 MA's), (Start: 77 @38501 has 2 MA's), (86, 38444), (90, 38408), (97,
38369), (104, 38342), (107, 38330),

Gene: VC3_61 Start: 38705, Stop: 38394, Start Num: 58

Candidate Starts for VC3_61:

(Start: 58 @38705 has 4 MA's), (Start: 62 @38666 has 7 MA's), (Start: 77 @38657 has 2 MA's), (90, 38564), (100, 38516), (107, 38486),

Gene: Vanisoa_58 Start: 39326, Stop: 39054, Start Num: 61

Candidate Starts for Vanisoa_58:

(Start: 61 @39326 has 111 MA's), (Start: 77 @39317 has 2 MA's), (86, 39260), (90, 39224), (100, 39176), (107, 39146), (109, 39137),

Gene: Vitas_33 Start: 23412, Stop: 23642, Start Num: 80

Candidate Starts for Vitas_33:

(24, 23160), (29, 23190), (Start: 75 @23403 has 7 MA's), (Start: 80 @23412 has 56 MA's), (91, 23499), (117, 23604), (123, 23634),

Gene: Waits_64 Start: 37663, Stop: 37394, Start Num: 73

Candidate Starts for Waits_64:

(5, 38107), (7, 38083), (12, 38005), (Start: 73 @37663 has 20 MA's), (107, 37486),

Gene: Welcome_36 Start: 10355, Stop: 10609, Start Num: 78

Candidate Starts for Welcome_36:

(22, 10088), (70, 10340), (Start: 78 @10355 has 21 MA's), (84, 10400), (92, 10451), (95, 10469), (99, 10487),

Gene: Whabigail7_59 Start: 38704, Stop: 38432, Start Num: 61

Candidate Starts for Whabigail7_59:

(Start: 61 @38704 has 111 MA's), (Start: 77 @38695 has 2 MA's), (81, 38683), (82, 38677), (100, 38554),

Gene: Wolfstar_31 Start: 9938, Stop: 10189, Start Num: 78

Candidate Starts for Wolfstar_31:

(10, 9515), (11, 9551), (67, 9908), (68, 9914), (Start: 78 @9938 has 21 MA's), (84, 9983), (89, 10019), (108, 10106),

Gene: Yecey3_59 Start: 38093, Stop: 37821, Start Num: 61

Candidate Starts for Yecey3_59:

(Start: 61 @38093 has 111 MA's), (Start: 77 @38084 has 2 MA's), (86, 38027), (90, 37991), (100, 37943), (104, 37925),

Gene: Yuma_34 Start: 10257, Stop: 10511, Start Num: 78

Candidate Starts for Yuma_34:

(70, 10242), (Start: 78 @10257 has 21 MA's), (84, 10302), (108, 10425),

Gene: Zimmer_55 Start: 39223, Stop: 38951, Start Num: 69

Candidate Starts for Zimmer_55:

(Start: 61 @39253 has 111 MA's), (Start: 69 @39223 has 2 MA's), (90, 39121), (100, 39073), (104, 39055), (107, 39043),

Gene: Zooman_331 Start: 183965, Stop: 184198, Start Num: 79

Candidate Starts for Zooman_331:

(Start: 79 @183965 has 2 MA's), (88, 184040), (124, 184187),

Gene: Zooman_18 Start: 8314, Stop: 8547, Start Num: 79

Candidate Starts for Zooman_18:

(Start: 79 @8314 has 2 MA's), (88, 8389), (124, 8536),