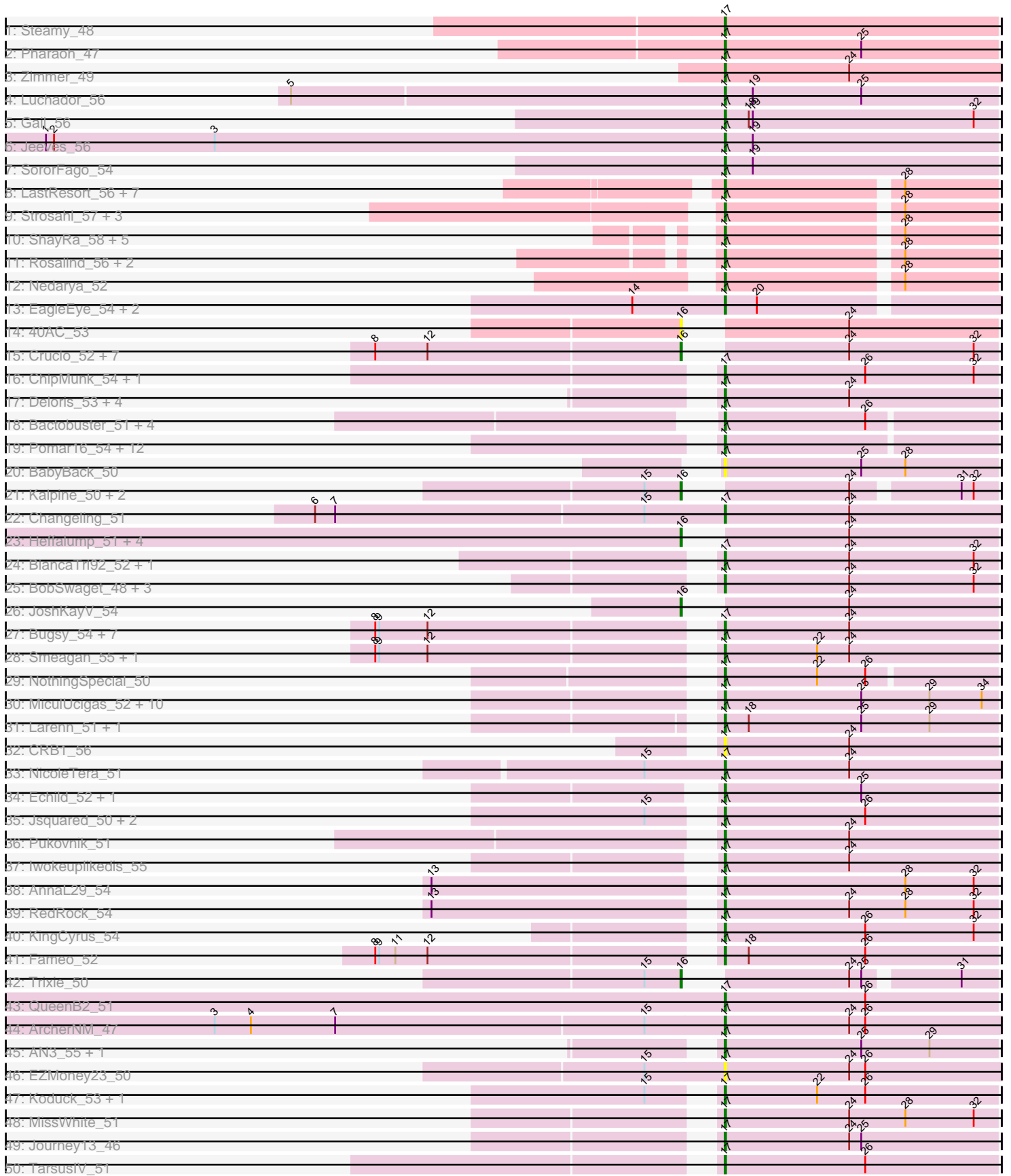


Pham 163382



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 163382 Report

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

Pham number 163382 has 169 members, 14 are drafts.

Phages represented in each track:

- Track 1 : Steamy_48
- Track 2 : Pharaoh_47
- Track 3 : Zimmer_49
- Track 4 : Luchador_56
- Track 5 : Gail_56
- Track 6 : Jeeves_56
- Track 7 : SororFago_54
- Track 8 : LastResort_56, JSwag_56, Boohoo_57, Anaysia_57, DekHockey33_57, Nebulosus_56, Epsocamisio_55, ReMo_56
- Track 9 : Strosahl_57, Oofda_58, Waits_57, Remus_57
- Track 10 : ShayRa_58, Anon_53, Soups_58, Looper_57, KatherineG_58, Switzerland_57
- Track 11 : Rosalind_56, MinecraftSteve_58, Battleship_59
- Track 12 : Nedarya_52
- Track 13 : EagleEye_54, PainterBoy_53, Lucyedi_53
- Track 14 : 40AC_53
- Track 15 : Crucio_52, SemperFi_53, FiringLine_52, Georgie2_53, SweetiePie_52, Power_51, SnapTap_52, QueenBeesly_52
- Track 16 : ChipMunk_54, EvilGenius_54
- Track 17 : Deloris_53, BengiVuitton_54, 20ES_55, LadyBird_57, First_0054
- Track 18 : Bactobuster_51, Jaan_52, IronMan_52, Landor_53, Phaded_53
- Track 19 : Pomar16_54, C3_50, Duplo_54, DBQu4n_54, AN9_55, Tomathan_54, D29_51, Naji_54, D32_53, VC3_55, StarStuff_54, ANI8_55, Kerberos_54
- Track 20 : BabyBack_50
- Track 21 : Kalpine_50, Colin_52, WeiHuaDA_54
- Track 22 : Changeling_51
- Track 23 : Heffalump_51, Dalmatian_53, DudeLittle_51, Anselm_53, Retro23_53
- Track 24 : BiancaTri92_52, Leogania_52
- Track 25 : BobSwaget_48, Miko_49, Rachaly_51, Lokk_49
- Track 26 : JoshKayV_54
- Track 27 : Buggy_54, AbbyPaige_54, Turbido_53, Leviathan_54, LilTurb_53, Whabigail7_53, Agape74_54, Jerm_54
- Track 28 : Smeagan_55, Dignity_54
- Track 29 : NothingSpecial_50
- Track 30 : MiculUcigas_52, Centaur_53, HarryHoudini_53, Piro94_52, NaSiaTalie_52, Drake55_54, Updawg_53, Flare16_52, Equemioh13_53, Baehexic_51, WideWale_53

- Track 31 : Larenn_51, Malec_52
- Track 32 : CRB1_56
- Track 33 : NicoleTera_51
- Track 34 : Echild_52, Benvolio_49
- Track 35 : Jsquared_50, TipsytheTRex_48, Serenity_52
- Track 36 : Pukovnik_51
- Track 37 : Iwokeuplikedis_55
- Track 38 : AnnaL29_54
- Track 39 : RedRock_54
- Track 40 : KingCyrus_54
- Track 41 : Fameo_52
- Track 42 : Trixie_50
- Track 43 : QueenB2_51
- Track 44 : ArcherNM_47
- Track 45 : AN3_55, VA6_53
- Track 46 : EZMoney23_50
- Track 47 : Koduck_53, L5_51
- Track 48 : MissWhite_51
- Track 49 : Journey13_46
- Track 50 : TarsusIV_51
- Track 51 : Loser_54
- Track 52 : GaugeLDP_50
- Track 53 : XianYue_51
- Track 54 : Trooper_53
- Track 55 : Timshel_38
- Track 56 : Sheen_39
- Track 57 : Pioneer_52, Phaeder_52, Priya_52, Catalina_53, ExplosioNervosa_52, Phonnegut_52, Eidsmoe_52, Scherzo_52, Myxus_52, EmyBug_49, Beemo_52, Ugenie5_49, Aliter_52, PackMan_51, Qobbit_52, HortumSL17_52, Conquerage_52, Fayely_52, Spouty_50, Tubs_52
- Track 58 : Arissanae_51, Rahalelujah_52
- Track 59 : Maminiaina_51, BogosyJay_51, Alma_52
- Track 60 : Elephantoon_51
- Track 61 : Toaka_52
- Track 62 : LoneWolf_53, Darrell_54
- Track 63 : Vanisoa_52
- Track 64 : Keziacharles14_52
- Track 65 : Yecey3_53

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

The start number called the most often in the published annotations is 17, it was called in 139 of the 155 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 20ES_55, AN3_55, AN9_55, ANI8_55, AbbyPaige_54, Agape74_54, Aliter_52, Alma_52, Anaysia_57, AnnaL29_54, Anon_53, ArcherNM_47, Arissanae_51, BabyBack_50, Bactobuster_51, Baehexic_51, Battleship_59, Beemo_52, BengiVuitton_54, Benvolio_49, BiancaTri92_52, BobSwaget_48, BogosyJay_51, Boohoo_57, Bugsy_54, C3_50, CRB1_56, Catalina_53, Centaur_53, Changeling_51,

ChipMunk_54, Conquerage_52, D29_51, D32_53, DBQu4n_54, Darrell_54, DekHockey33_57, Deloris_53, Dignity_54, Drake55_54, Duplo_54, EZMoney23_50, EagleEye_54, Echild_52, Eidsmoe_52, Elephantoon_51, EmyBug_49, Epsocamisio_55, Equemioh13_53, EvilGenius_54, ExplosioNervosa_52, Fameo_52, Fayely_52, First_0054, Flare16_52, Gail_56, GaugeLDP_50, HarryHoudini_53, HortumSL17_52, IronMan_52, Iwokeuplikedis_55, JSwag_56, Jaan_52, Jeeves_56, Jerm_54, Journey13_46, Jsquared_50, KatherineG_58, Kerberos_54, Keziacharles14_52, KingCyrus_54, Koduck_53, L5_51, LadyBird_57, Landor_53, Larenn_51, LastResort_56, Leogania_52, Leviathan_54, LilTurb_53, Lokk_49, LoneWolf_53, Looper_57, Loser_54, Luchador_56, Lucyedi_53, Malec_52, Maminiaina_51, MiculUcigas_52, Miko_49, MinecraftSteve_58, MissWhite_51, Myxus_52, NaSiaTalie_52, Naji_54, Nebulosus_56, Nedarya_52, NicoleTera_51, NothingSpecial_50, Oofda_58, PackMan_51, PainterBoy_53, Phaded_53, Phaeder_52, Pharaoh_47, Phonnegut_52, Pioneer_52, Piro94_52, Pomar16_54, Priya_52, Pukovnik_51, Qobbit_52, QueenB2_51, Rachaly_51, Rahalelujah_52, ReMo_56, RedRock_54, Remus_57, Rosalind_56, Scherzo_52, Serenity_52, ShayRa_58, Sheen_39, Smeagan_55, SororFago_54, Soups_58, Spouty_50, StarStuff_54, Steamy_48, Strosahl_57, Switzerland_57, TarsusIV_51, Timshel_38, TipsytheTRex_48, Toaka_52, Tomathan_54, Trooper_53, Tubs_52, Turbido_53, Ugenie5_49, Updawg_53, VA6_53, VC3_55, Vanisoa_52, Waits_57, Whabigail7_53, WideWale_53, XianYue_51, Yecy3_53, Zimmer_49,

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

-

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

- 40AC_53, Anselm_53, Colin_52, Crucio_52, Dalmatian_53, DudeLittle_51, FiringLine_52, Georgie2_53, Heffalump_51, JoshKayV_54, Kalpine_50, Power_51, QueenBeesly_52, Retro23_53, SemperFi_53, SnapTap_52, SweetiePie_52, Trixie_50, WeiHuaDA_54,

Summary by start number:

Start 16:

- Found in 19 of 169 (11.2%) of genes in pham
- Manual Annotations of this start: 16 of 155
- Called 100.0% of time when present
- Phage (with cluster) where this start called: 40AC_53 (A17), Anselm_53 (A2), Colin_52 (A2), Crucio_52 (A2), Dalmatian_53 (A2), DudeLittle_51 (A2), FiringLine_52 (A2), Georgie2_53 (A2), Heffalump_51 (A2), JoshKayV_54 (A2), Kalpine_50 (A2), Power_51 (A2), QueenBeesly_52 (A2), Retro23_53 (A2), SemperFi_53 (A2), SnapTap_52 (A2), SweetiePie_52 (A2), Trixie_50 (A2), WeiHuaDA_54 (A2),

Start 17:

- Found in 150 of 169 (88.8%) of genes in pham
- Manual Annotations of this start: 139 of 155
- Called 100.0% of time when present
- Phage (with cluster) where this start called: 20ES_55 (A2), AN3_55 (A2), AN9_55 (A2), AN18_55 (A2), AbbyPaige_54 (A2), Agape74_54 (A2), Aliter_52 (A9), Alma_52 (A9), Anaysia_57 (A15), AnnaL29_54 (A2), Anon_53 (A15), ArcherNM_47 (A2), Arissanae_51 (A9), BabyBack_50 (A2), Bactobuster_51 (A2), Baehexic_51 (A2), Battleship_59 (A15), Beemo_52 (A9), BengiVuitton_54 (A2), Benvolio_49 (A2), BiancaTri92_52 (A2), BobSwaget_48 (A2), BogosyJay_51 (A9), Boohoo_57 (A15),

Bugsy_54 (A2), C3_50 (A2), CRB1_56 (A2), Catalina_53 (A9), Centaur_53 (A2), Changeling_51 (A2), ChipMunk_54 (A2), Conquerage_52 (A9), D29_51 (A2), D32_53 (A2), DBQu4n_54 (A2), Darrell_54 (A9), DekHockey33_57 (A15), Deloris_53 (A2), Dignity_54 (A2), Drake55_54 (A2), Duplo_54 (A2), EZMoney23_50 (A2), EagleEye_54 (A16), Echild_52 (A2), Eidsmoe_52 (A9), Elephanto_51 (A9), EmyBug_49 (A9), Epsocamisio_55 (A15), Equemioh13_53 (A2), EvilGenius_54 (A2), ExplosioNervosa_52 (A9), Fameo_52 (A2), Fayely_52 (A9), First_0054 (A2), Flare16_52 (A2), Gail_56 (A14), GaugeLDP_50 (A2), HarryHoudini_53 (A2), HortumSL17_52 (A9), IronMan_52 (A2), Iwokeuplikedis_55 (A2), JSwag_56 (A15), Jaan_52 (A2), Jeeves_56 (A14), Jerm_54 (A2), Journey13_46 (A2), Jsquared_50 (A2), KatherineG_58 (A15), Kerberos_54 (A2), Keziacharles14_52 (A9), KingCyrus_54 (A2), Koduck_53 (A2), L5_51 (A2), LadyBird_57 (A2), Landor_53 (A2), Larenn_51 (A2), LastResort_56 (A15), Leogania_52 (A2), Leviathan_54 (A2), LilTurb_53 (A2), Lokk_49 (A2), LoneWolf_53 (A9), Looper_57 (A15), Loser_54 (A2), Luchador_56 (A14), Lucyedi_53 (A16), Malec_52 (A2), Maminaiaina_51 (A9), MiculUcigas_52 (A2), Miko_49 (A2), MinecraftSteve_58 (A15), MissWhite_51 (A2), Myxus_52 (A9), NaSiaTalie_52 (A2), Naji_54 (A2), Nebulosus_56 (A15), Nedarya_52 (A15), NicoleTera_51 (A2), NothingSpecial_50 (A2), Oofda_58 (A15), PackMan_51 (A9), PainterBoy_53 (A16), Phaded_53 (A2), Phaeder_52 (A9), Pharaoh_47 (A12), Phonnegut_52 (A9), Pioneer_52 (A9), Piro94_52 (A2), Pomar16_54 (A2), Priya_52 (A9), Pukovnik_51 (A2), Qobbit_52 (A9), QueenB2_51 (A2), Rachaly_51 (A2), Rahalelujah_52 (A9), ReMo_56 (A15), RedRock_54 (A2), Remus_57 (A15), Rosalind_56 (A15), Scherzo_52 (A9), Serenity_52 (A2), ShayRa_58 (A15), Sheen_39 (A7), Smeagan_55 (A2), SororFago_54 (A14), Soups_58 (A15), Spouty_50 (A9), StarStuff_54 (A2), Steamy_48 (A12), Strosahl_57 (A15), Switzerland_57 (A15), TarsusIV_51 (A2), Timshel_38 (A7), TipsytheTRex_48 (A2), Toaka_52 (A9), Tomathan_54 (A2), Trooper_53 (A2), Tubs_52 (A9), Turbido_53 (A2), Ugenie5_49 (A9), Updawg_53 (A2), VA6_53 (A2), VC3_55 (A2), Vanisoa_52 (A9), Waits_57 (A15), Whabigail7_53 (A2), WideWale_53 (A2), XianYue_51 (A2), Yecey3_53 (A9), Zimmer_49 (A12),

Summary by clusters:

There are 8 clusters represented in this pham: A15, A14, A17, A16, A12, A2, A7, A9,

Info for manual annotations of cluster A12:

- Start number 17 was manually annotated 3 times for cluster A12.

Info for manual annotations of cluster A14:

- Start number 17 was manually annotated 4 times for cluster A14.

Info for manual annotations of cluster A15:

- Start number 17 was manually annotated 21 times for cluster A15.

Info for manual annotations of cluster A16:

- Start number 17 was manually annotated 3 times for cluster A16.

Info for manual annotations of cluster A2:

- Start number 16 was manually annotated 16 times for cluster A2.
- Start number 17 was manually annotated 77 times for cluster A2.

Info for manual annotations of cluster A7:

•Start number 17 was manually annotated 2 times for cluster A7.

Info for manual annotations of cluster A9:

•Start number 17 was manually annotated 29 times for cluster A9.

Gene Information:

Gene: 20ES_55 Start: 36467, Stop: 36264, Start Num: 17

Candidate Starts for 20ES_55:

(Start: 17 @36467 has 139 MA's), (24, 36374),

Gene: 40AC_53 Start: 37199, Stop: 36996, Start Num: 16

Candidate Starts for 40AC_53:

(Start: 16 @37199 has 16 MA's), (24, 37106),

Gene: AN3_55 Start: 35152, Stop: 34949, Start Num: 17

Candidate Starts for AN3_55:

(Start: 17 @35152 has 139 MA's), (25, 35050), (29, 34999),

Gene: AN9_55 Start: 36177, Stop: 35980, Start Num: 17

Candidate Starts for AN9_55:

(Start: 17 @36177 has 139 MA's),

Gene: ANI8_55 Start: 36177, Stop: 35980, Start Num: 17

Candidate Starts for ANI8_55:

(Start: 17 @36177 has 139 MA's),

Gene: AbbyPaige_54 Start: 36398, Stop: 36195, Start Num: 17

Candidate Starts for AbbyPaige_54:

(8, 36632), (9, 36629), (12, 36593), (Start: 17 @36398 has 139 MA's), (24, 36305),

Gene: Agape74_54 Start: 36392, Stop: 36189, Start Num: 17

Candidate Starts for Agape74_54:

(8, 36626), (9, 36623), (12, 36587), (Start: 17 @36392 has 139 MA's), (24, 36299),

Gene: Aliter_52 Start: 35801, Stop: 35598, Start Num: 17

Candidate Starts for Aliter_52:

(Start: 17 @35801 has 139 MA's), (25, 35699), (27, 35678),

Gene: Alma_52 Start: 35981, Stop: 35778, Start Num: 17

Candidate Starts for Alma_52:

(Start: 17 @35981 has 139 MA's),

Gene: Anaysia_57 Start: 35107, Stop: 34916, Start Num: 17

Candidate Starts for Anaysia_57:

(Start: 17 @35107 has 139 MA's), (28, 34984),

Gene: AnnaL29_54 Start: 36947, Stop: 36744, Start Num: 17

Candidate Starts for AnnaL29_54:

(13, 37142), (Start: 17 @36947 has 139 MA's), (28, 36812), (32, 36761),

Gene: Anon_53 Start: 34405, Stop: 34214, Start Num: 17

Candidate Starts for Anon_53:

(Start: 17 @34405 has 139 MA's), (28, 34282),

Gene: Anselm_53 Start: 36320, Stop: 36117, Start Num: 16

Candidate Starts for Anselm_53:

(Start: 16 @36320 has 16 MA's), (24, 36227),

Gene: ArcherNM_47 Start: 35909, Stop: 35703, Start Num: 17

Candidate Starts for ArcherNM_47:

(3, 36257), (4, 36230), (7, 36167), (15, 35939), (Start: 17 @35909 has 139 MA's), (24, 35816), (26, 35804),

Gene: Arissanae_51 Start: 36505, Stop: 36302, Start Num: 17

Candidate Starts for Arissanae_51:

(Start: 17 @36505 has 139 MA's), (23, 36415),

Gene: BabyBack_50 Start: 36632, Stop: 36429, Start Num: 17

Candidate Starts for BabyBack_50:

(Start: 17 @36632 has 139 MA's), (25, 36530), (28, 36497),

Gene: Bactobuster_51 Start: 36870, Stop: 36673, Start Num: 17

Candidate Starts for Bactobuster_51:

(Start: 17 @36870 has 139 MA's), (26, 36765),

Gene: Baehexic_51 Start: 36076, Stop: 35873, Start Num: 17

Candidate Starts for Baehexic_51:

(Start: 17 @36076 has 139 MA's), (25, 35974), (29, 35923), (34, 35884),

Gene: Battleship_59 Start: 35378, Stop: 35187, Start Num: 17

Candidate Starts for Battleship_59:

(Start: 17 @35378 has 139 MA's), (28, 35255),

Gene: Beemo_52 Start: 35971, Stop: 35768, Start Num: 17

Candidate Starts for Beemo_52:

(Start: 17 @35971 has 139 MA's), (25, 35869), (27, 35848),

Gene: BengiVuitton_54 Start: 36435, Stop: 36232, Start Num: 17

Candidate Starts for BengiVuitton_54:

(Start: 17 @36435 has 139 MA's), (24, 36342),

Gene: Benvolio_49 Start: 35345, Stop: 35142, Start Num: 17

Candidate Starts for Benvolio_49:

(Start: 17 @35345 has 139 MA's), (25, 35243),

Gene: BiancaTri92_52 Start: 36725, Stop: 36522, Start Num: 17

Candidate Starts for BiancaTri92_52:

(Start: 17 @36725 has 139 MA's), (24, 36632), (32, 36539),

Gene: BobSwaget_48 Start: 34748, Stop: 34545, Start Num: 17

Candidate Starts for BobSwaget_48:

(Start: 17 @34748 has 139 MA's), (24, 34655), (32, 34562),

Gene: BogosyJay_51 Start: 35686, Stop: 35495, Start Num: 17
Candidate Starts for BogosyJay_51:
(Start: 17 @35686 has 139 MA's),

Gene: Boohoo_57 Start: 35107, Stop: 34916, Start Num: 17
Candidate Starts for Boohoo_57:
(Start: 17 @35107 has 139 MA's), (28, 34984),

Gene: Buggy_54 Start: 36449, Stop: 36246, Start Num: 17
Candidate Starts for Buggy_54:
(8, 36683), (9, 36680), (12, 36644), (Start: 17 @36449 has 139 MA's), (24, 36356),

Gene: C3_50 Start: 36177, Stop: 35980, Start Num: 17
Candidate Starts for C3_50:
(Start: 17 @36177 has 139 MA's),

Gene: CRB1_56 Start: 36810, Stop: 36607, Start Num: 17
Candidate Starts for CRB1_56:
(Start: 17 @36810 has 139 MA's), (24, 36717),

Gene: Catalina_53 Start: 35874, Stop: 35671, Start Num: 17
Candidate Starts for Catalina_53:
(Start: 17 @35874 has 139 MA's), (25, 35772), (27, 35751),

Gene: Centaur_53 Start: 36293, Stop: 36090, Start Num: 17
Candidate Starts for Centaur_53:
(Start: 17 @36293 has 139 MA's), (25, 36191), (29, 36140), (34, 36101),

Gene: Changeling_51 Start: 36504, Stop: 36298, Start Num: 17
Candidate Starts for Changeling_51:
(6, 36777), (7, 36762), (15, 36534), (Start: 17 @36504 has 139 MA's), (24, 36411),

Gene: ChipMunk_54 Start: 37667, Stop: 37464, Start Num: 17
Candidate Starts for ChipMunk_54:
(Start: 17 @37667 has 139 MA's), (26, 37562), (32, 37481),

Gene: Colin_52 Start: 36294, Stop: 36103, Start Num: 16
Candidate Starts for Colin_52:
(15, 36321), (Start: 16 @36294 has 16 MA's), (24, 36201), (31, 36129), (32, 36120),

Gene: Conquerage_52 Start: 35945, Stop: 35742, Start Num: 17
Candidate Starts for Conquerage_52:
(Start: 17 @35945 has 139 MA's), (25, 35843), (27, 35822),

Gene: Crucio_52 Start: 35901, Stop: 35698, Start Num: 16
Candidate Starts for Crucio_52:
(8, 36126), (12, 36087), (Start: 16 @35901 has 16 MA's), (24, 35808), (32, 35715),

Gene: D29_51 Start: 35759, Stop: 35562, Start Num: 17
Candidate Starts for D29_51:
(Start: 17 @35759 has 139 MA's),

Gene: D32_53 Start: 35759, Stop: 35562, Start Num: 17

Candidate Starts for D32_53:
(Start: 17 @35759 has 139 MA's),

Gene: DBQu4n_54 Start: 35740, Stop: 35543, Start Num: 17
Candidate Starts for DBQu4n_54:
(Start: 17 @35740 has 139 MA's),

Gene: Dalmatian_53 Start: 36293, Stop: 36090, Start Num: 16
Candidate Starts for Dalmatian_53:
(Start: 16 @36293 has 16 MA's), (24, 36200),

Gene: Darrell_54 Start: 36574, Stop: 36371, Start Num: 17
Candidate Starts for Darrell_54:
(Start: 17 @36574 has 139 MA's), (24, 36481), (28, 36439),

Gene: DekHockey33_57 Start: 35399, Stop: 35208, Start Num: 17
Candidate Starts for DekHockey33_57:
(Start: 17 @35399 has 139 MA's), (28, 35276),

Gene: Deloris_53 Start: 36104, Stop: 35901, Start Num: 17
Candidate Starts for Deloris_53:
(Start: 17 @36104 has 139 MA's), (24, 36011),

Gene: Dignity_54 Start: 36472, Stop: 36269, Start Num: 17
Candidate Starts for Dignity_54:
(8, 36706), (9, 36703), (12, 36667), (Start: 17 @36472 has 139 MA's), (22, 36403), (24, 36379),

Gene: Drake55_54 Start: 36372, Stop: 36169, Start Num: 17
Candidate Starts for Drake55_54:
(Start: 17 @36372 has 139 MA's), (25, 36270), (29, 36219), (34, 36180),

Gene: DudeLittle_51 Start: 36059, Stop: 35856, Start Num: 16
Candidate Starts for DudeLittle_51:
(Start: 16 @36059 has 16 MA's), (24, 35966),

Gene: Duplo_54 Start: 35796, Stop: 35599, Start Num: 17
Candidate Starts for Duplo_54:
(Start: 17 @35796 has 139 MA's),

Gene: EZMoney23_50 Start: 35817, Stop: 35611, Start Num: 17
Candidate Starts for EZMoney23_50:
(15, 35847), (Start: 17 @35817 has 139 MA's), (24, 35724), (26, 35712),

Gene: EagleEye_54 Start: 35531, Stop: 35337, Start Num: 17
Candidate Starts for EagleEye_54:
(14, 35600), (Start: 17 @35531 has 139 MA's), (20, 35507),

Gene: Echild_52 Start: 35369, Stop: 35166, Start Num: 17
Candidate Starts for Echild_52:
(Start: 17 @35369 has 139 MA's), (25, 35267),

Gene: Eidsmoe_52 Start: 35937, Stop: 35734, Start Num: 17
Candidate Starts for Eidsmoe_52:

(Start: 17 @35937 has 139 MA's), (25, 35835), (27, 35814),

Gene: Elephantoon_51 Start: 35319, Stop: 35116, Start Num: 17

Candidate Starts for Elephantoon_51:

(Start: 17 @35319 has 139 MA's), (23, 35229), (28, 35184),

Gene: EmyBug_49 Start: 35939, Stop: 35736, Start Num: 17

Candidate Starts for EmyBug_49:

(Start: 17 @35939 has 139 MA's), (25, 35837), (27, 35816),

Gene: Epsocamisio_55 Start: 34642, Stop: 34451, Start Num: 17

Candidate Starts for Epsocamisio_55:

(Start: 17 @34642 has 139 MA's), (28, 34519),

Gene: Equemioh13_53 Start: 36195, Stop: 35992, Start Num: 17

Candidate Starts for Equemioh13_53:

(Start: 17 @36195 has 139 MA's), (25, 36093), (29, 36042), (34, 36003),

Gene: EvilGenius_54 Start: 37668, Stop: 37465, Start Num: 17

Candidate Starts for EvilGenius_54:

(Start: 17 @37668 has 139 MA's), (26, 37563), (32, 37482),

Gene: ExplosioNervosa_52 Start: 36005, Stop: 35802, Start Num: 17

Candidate Starts for ExplosioNervosa_52:

(Start: 17 @36005 has 139 MA's), (25, 35903), (27, 35882),

Gene: Fameo_52 Start: 36229, Stop: 36026, Start Num: 17

Candidate Starts for Fameo_52:

(8, 36463), (9, 36460), (11, 36448), (12, 36424), (Start: 17 @36229 has 139 MA's), (18, 36211), (26, 36124),

Gene: Fayely_52 Start: 35906, Stop: 35703, Start Num: 17

Candidate Starts for Fayely_52:

(Start: 17 @35906 has 139 MA's), (25, 35804), (27, 35783),

Gene: FiringLine_52 Start: 35882, Stop: 35679, Start Num: 16

Candidate Starts for FiringLine_52:

(8, 36107), (12, 36068), (Start: 16 @35882 has 16 MA's), (24, 35789), (32, 35696),

Gene: First_0054 Start: 36367, Stop: 36164, Start Num: 17

Candidate Starts for First_0054:

(Start: 17 @36367 has 139 MA's), (24, 36274),

Gene: Flare16_52 Start: 35954, Stop: 35751, Start Num: 17

Candidate Starts for Flare16_52:

(Start: 17 @35954 has 139 MA's), (25, 35852), (29, 35801), (34, 35762),

Gene: Gail_56 Start: 36974, Stop: 36771, Start Num: 17

Candidate Starts for Gail_56:

(Start: 17 @36974 has 139 MA's), (18, 36956), (19, 36953), (32, 36788),

Gene: GaugeLDP_50 Start: 36223, Stop: 36020, Start Num: 17

Candidate Starts for GaugeLDP_50:

(8, 36457), (10, 36445), (Start: 17 @36223 has 139 MA's), (25, 36121), (28, 36088),

Gene: Georgie2_53 Start: 35927, Stop: 35724, Start Num: 16

Candidate Starts for Georgie2_53:

(8, 36152), (12, 36113), (Start: 16 @35927 has 16 MA's), (24, 35834), (32, 35741),

Gene: HarryHoudini_53 Start: 36381, Stop: 36178, Start Num: 17

Candidate Starts for HarryHoudini_53:

(Start: 17 @36381 has 139 MA's), (25, 36279), (29, 36228), (34, 36189),

Gene: Heffalump_51 Start: 36700, Stop: 36497, Start Num: 16

Candidate Starts for Heffalump_51:

(Start: 16 @36700 has 16 MA's), (24, 36607),

Gene: HortumSL17_52 Start: 35873, Stop: 35670, Start Num: 17

Candidate Starts for HortumSL17_52:

(Start: 17 @35873 has 139 MA's), (25, 35771), (27, 35750),

Gene: IronMan_52 Start: 37053, Stop: 36856, Start Num: 17

Candidate Starts for IronMan_52:

(Start: 17 @37053 has 139 MA's), (26, 36948),

Gene: Iwokeuplikedis_55 Start: 36010, Stop: 35807, Start Num: 17

Candidate Starts for Iwokeuplikedis_55:

(Start: 17 @36010 has 139 MA's), (24, 35917),

Gene: JSwag_56 Start: 34831, Stop: 34640, Start Num: 17

Candidate Starts for JSwag_56:

(Start: 17 @34831 has 139 MA's), (28, 34708),

Gene: Jaan_52 Start: 37225, Stop: 37028, Start Num: 17

Candidate Starts for Jaan_52:

(Start: 17 @37225 has 139 MA's), (26, 37120),

Gene: Jeeves_56 Start: 35746, Stop: 35543, Start Num: 17

Candidate Starts for Jeeves_56:

(1, 36253), (2, 36247), (3, 36127), (Start: 17 @35746 has 139 MA's), (19, 35725),

Gene: Jerm_54 Start: 36464, Stop: 36261, Start Num: 17

Candidate Starts for Jerm_54:

(8, 36698), (9, 36695), (12, 36659), (Start: 17 @36464 has 139 MA's), (24, 36371),

Gene: JoshKayV_54 Start: 36567, Stop: 36364, Start Num: 16

Candidate Starts for JoshKayV_54:

(Start: 16 @36567 has 16 MA's), (24, 36474),

Gene: Journey13_46 Start: 34280, Stop: 34077, Start Num: 17

Candidate Starts for Journey13_46:

(Start: 17 @34280 has 139 MA's), (24, 34187), (25, 34178),

Gene: Jsquared_50 Start: 34885, Stop: 34682, Start Num: 17

Candidate Starts for Jsquared_50:

(15, 34921), (Start: 17 @34885 has 139 MA's), (26, 34780),

Gene: Kalpine_50 Start: 36165, Stop: 35974, Start Num: 16
Candidate Starts for Kalpine_50:
(15, 36192), (Start: 16 @36165 has 16 MA's), (24, 36072), (31, 36000), (32, 35991),

Gene: KatherineG_58 Start: 35369, Stop: 35178, Start Num: 17
Candidate Starts for KatherineG_58:
(Start: 17 @35369 has 139 MA's), (28, 35246),

Gene: Kerberos_54 Start: 35758, Stop: 35561, Start Num: 17
Candidate Starts for Kerberos_54:
(Start: 17 @35758 has 139 MA's),

Gene: Keziacharles14_52 Start: 36997, Stop: 36794, Start Num: 17
Candidate Starts for Keziacharles14_52:
(Start: 17 @36997 has 139 MA's), (24, 36904), (28, 36862), (32, 36811),

Gene: KingCyrus_54 Start: 37663, Stop: 37460, Start Num: 17
Candidate Starts for KingCyrus_54:
(Start: 17 @37663 has 139 MA's), (26, 37558), (32, 37477),

Gene: Koduck_53 Start: 35170, Stop: 34967, Start Num: 17
Candidate Starts for Koduck_53:
(15, 35206), (Start: 17 @35170 has 139 MA's), (22, 35101), (26, 35065),

Gene: L5_51 Start: 35245, Stop: 35042, Start Num: 17
Candidate Starts for L5_51:
(15, 35281), (Start: 17 @35245 has 139 MA's), (22, 35176), (26, 35140),

Gene: LadyBird_57 Start: 36796, Stop: 36593, Start Num: 17
Candidate Starts for LadyBird_57:
(Start: 17 @36796 has 139 MA's), (24, 36703),

Gene: Landor_53 Start: 37131, Stop: 36934, Start Num: 17
Candidate Starts for Landor_53:
(Start: 17 @37131 has 139 MA's), (26, 37026),

Gene: Larenn_51 Start: 36058, Stop: 35855, Start Num: 17
Candidate Starts for Larenn_51:
(Start: 17 @36058 has 139 MA's), (18, 36040), (25, 35956), (29, 35905),

Gene: LastResort_56 Start: 34883, Stop: 34692, Start Num: 17
Candidate Starts for LastResort_56:
(Start: 17 @34883 has 139 MA's), (28, 34760),

Gene: Leogania_52 Start: 37103, Stop: 36900, Start Num: 17
Candidate Starts for Leogania_52:
(Start: 17 @37103 has 139 MA's), (24, 37010), (32, 36917),

Gene: Leviathan_54 Start: 36521, Stop: 36318, Start Num: 17
Candidate Starts for Leviathan_54:
(8, 36755), (9, 36752), (12, 36716), (Start: 17 @36521 has 139 MA's), (24, 36428),

Gene: LilTurb_53 Start: 36345, Stop: 36142, Start Num: 17
Candidate Starts for LilTurb_53:
(8, 36579), (9, 36576), (12, 36540), (Start: 17 @36345 has 139 MA's), (24, 36252),

Gene: Lokk_49 Start: 35288, Stop: 35085, Start Num: 17
Candidate Starts for Lokk_49:
(Start: 17 @35288 has 139 MA's), (24, 35195), (32, 35102),

Gene: LoneWolf_53 Start: 35913, Stop: 35710, Start Num: 17
Candidate Starts for LoneWolf_53:
(Start: 17 @35913 has 139 MA's), (24, 35820), (28, 35778),

Gene: Looper_57 Start: 34860, Stop: 34669, Start Num: 17
Candidate Starts for Looper_57:
(Start: 17 @34860 has 139 MA's), (28, 34737),

Gene: Loser_54 Start: 36918, Stop: 36712, Start Num: 17
Candidate Starts for Loser_54:
(Start: 17 @36918 has 139 MA's), (24, 36825), (28, 36783),

Gene: Luchador_56 Start: 37531, Stop: 37328, Start Num: 17
Candidate Starts for Luchador_56:
(5, 37852), (Start: 17 @37531 has 139 MA's), (19, 37510), (25, 37429),

Gene: Lucyedi_53 Start: 35727, Stop: 35533, Start Num: 17
Candidate Starts for Lucyedi_53:
(14, 35796), (Start: 17 @35727 has 139 MA's), (20, 35703),

Gene: Malec_52 Start: 36625, Stop: 36422, Start Num: 17
Candidate Starts for Malec_52:
(Start: 17 @36625 has 139 MA's), (18, 36607), (25, 36523), (29, 36472),

Gene: Maminiaina_51 Start: 35668, Stop: 35477, Start Num: 17
Candidate Starts for Maminiaina_51:
(Start: 17 @35668 has 139 MA's),

Gene: MiculUcigas_52 Start: 35857, Stop: 35654, Start Num: 17
Candidate Starts for MiculUcigas_52:
(Start: 17 @35857 has 139 MA's), (25, 35755), (29, 35704), (34, 35665),

Gene: Miko_49 Start: 36066, Stop: 35863, Start Num: 17
Candidate Starts for Miko_49:
(Start: 17 @36066 has 139 MA's), (24, 35973), (32, 35880),

Gene: MinecraftSteve_58 Start: 35169, Stop: 34978, Start Num: 17
Candidate Starts for MinecraftSteve_58:
(Start: 17 @35169 has 139 MA's), (28, 35046),

Gene: MissWhite_51 Start: 34431, Stop: 34228, Start Num: 17
Candidate Starts for MissWhite_51:
(Start: 17 @34431 has 139 MA's), (24, 34338), (28, 34296), (32, 34245),

Gene: Myxus_52 Start: 35873, Stop: 35670, Start Num: 17

Candidate Starts for Myxus_52:

(Start: 17 @35873 has 139 MA's), (25, 35771), (27, 35750),

Gene: NaSiaTalie_52 Start: 35951, Stop: 35748, Start Num: 17

Candidate Starts for NaSiaTalie_52:

(Start: 17 @35951 has 139 MA's), (25, 35849), (29, 35798), (34, 35759),

Gene: Naji_54 Start: 35759, Stop: 35562, Start Num: 17

Candidate Starts for Naji_54:

(Start: 17 @35759 has 139 MA's),

Gene: Nebulosus_56 Start: 34879, Stop: 34688, Start Num: 17

Candidate Starts for Nebulosus_56:

(Start: 17 @34879 has 139 MA's), (28, 34756),

Gene: Nedarya_52 Start: 34325, Stop: 34134, Start Num: 17

Candidate Starts for Nedarya_52:

(Start: 17 @34325 has 139 MA's), (28, 34202),

Gene: NicoleTera_51 Start: 36222, Stop: 36016, Start Num: 17

Candidate Starts for NicoleTera_51:

(15, 36282), (Start: 17 @36222 has 139 MA's), (24, 36129),

Gene: NothingSpecial_50 Start: 36473, Stop: 36276, Start Num: 17

Candidate Starts for NothingSpecial_50:

(Start: 17 @36473 has 139 MA's), (22, 36404), (26, 36368),

Gene: Oofda_58 Start: 35001, Stop: 34810, Start Num: 17

Candidate Starts for Oofda_58:

(Start: 17 @35001 has 139 MA's), (28, 34878),

Gene: PackMan_51 Start: 35873, Stop: 35670, Start Num: 17

Candidate Starts for PackMan_51:

(Start: 17 @35873 has 139 MA's), (25, 35771), (27, 35750),

Gene: PainterBoy_53 Start: 35664, Stop: 35470, Start Num: 17

Candidate Starts for PainterBoy_53:

(14, 35733), (Start: 17 @35664 has 139 MA's), (20, 35640),

Gene: Phaded_53 Start: 37110, Stop: 36913, Start Num: 17

Candidate Starts for Phaded_53:

(Start: 17 @37110 has 139 MA's), (26, 37005),

Gene: Phaeder_52 Start: 35873, Stop: 35670, Start Num: 17

Candidate Starts for Phaeder_52:

(Start: 17 @35873 has 139 MA's), (25, 35771), (27, 35750),

Gene: Pharaoh_47 Start: 35694, Stop: 35491, Start Num: 17

Candidate Starts for Pharaoh_47:

(Start: 17 @35694 has 139 MA's), (25, 35592),

Gene: Phonnegut_52 Start: 35970, Stop: 35767, Start Num: 17

Candidate Starts for Phonnegut_52:

(Start: 17 @35970 has 139 MA's), (25, 35868), (27, 35847),

Gene: Pioneer_52 Start: 35970, Stop: 35767, Start Num: 17

Candidate Starts for Pioneer_52:

(Start: 17 @35970 has 139 MA's), (25, 35868), (27, 35847),

Gene: Piro94_52 Start: 36298, Stop: 36095, Start Num: 17

Candidate Starts for Piro94_52:

(Start: 17 @36298 has 139 MA's), (25, 36196), (29, 36145), (34, 36106),

Gene: Pomar16_54 Start: 35799, Stop: 35602, Start Num: 17

Candidate Starts for Pomar16_54:

(Start: 17 @35799 has 139 MA's),

Gene: Power_51 Start: 35935, Stop: 35732, Start Num: 16

Candidate Starts for Power_51:

(8, 36160), (12, 36121), (Start: 16 @35935 has 16 MA's), (24, 35842), (32, 35749),

Gene: Priya_52 Start: 35940, Stop: 35737, Start Num: 17

Candidate Starts for Priya_52:

(Start: 17 @35940 has 139 MA's), (25, 35838), (27, 35817),

Gene: Pukovnik_51 Start: 36758, Stop: 36555, Start Num: 17

Candidate Starts for Pukovnik_51:

(Start: 17 @36758 has 139 MA's), (24, 36665),

Gene: Qobbit_52 Start: 35902, Stop: 35699, Start Num: 17

Candidate Starts for Qobbit_52:

(Start: 17 @35902 has 139 MA's), (25, 35800), (27, 35779),

Gene: QueenB2_51 Start: 35913, Stop: 35710, Start Num: 17

Candidate Starts for QueenB2_51:

(Start: 17 @35913 has 139 MA's), (26, 35808),

Gene: QueenBeesly_52 Start: 35882, Stop: 35679, Start Num: 16

Candidate Starts for QueenBeesly_52:

(8, 36107), (12, 36068), (Start: 16 @35882 has 16 MA's), (24, 35789), (32, 35696),

Gene: Rachaly_51 Start: 36211, Stop: 36008, Start Num: 17

Candidate Starts for Rachaly_51:

(Start: 17 @36211 has 139 MA's), (24, 36118), (32, 36025),

Gene: Rahalelujah_52 Start: 35451, Stop: 35248, Start Num: 17

Candidate Starts for Rahalelujah_52:

(Start: 17 @35451 has 139 MA's), (23, 35361),

Gene: ReMo_56 Start: 34880, Stop: 34689, Start Num: 17

Candidate Starts for ReMo_56:

(Start: 17 @34880 has 139 MA's), (28, 34757),

Gene: RedRock_54 Start: 37127, Stop: 36924, Start Num: 17

Candidate Starts for RedRock_54:

(13, 37322), (Start: 17 @37127 has 139 MA's), (24, 37034), (28, 36992), (32, 36941),

Gene: Remus_57 Start: 34790, Stop: 34599, Start Num: 17

Candidate Starts for Remus_57:

(Start: 17 @34790 has 139 MA's), (28, 34667),

Gene: Retro23_53 Start: 36313, Stop: 36110, Start Num: 16

Candidate Starts for Retro23_53:

(Start: 16 @36313 has 16 MA's), (24, 36220),

Gene: Rosalind_56 Start: 35088, Stop: 34897, Start Num: 17

Candidate Starts for Rosalind_56:

(Start: 17 @35088 has 139 MA's), (28, 34965),

Gene: Scherzo_52 Start: 36159, Stop: 35956, Start Num: 17

Candidate Starts for Scherzo_52:

(Start: 17 @36159 has 139 MA's), (25, 36057), (27, 36036),

Gene: SemperFi_53 Start: 36150, Stop: 35947, Start Num: 16

Candidate Starts for SemperFi_53:

(8, 36375), (12, 36336), (Start: 16 @36150 has 16 MA's), (24, 36057), (32, 35964),

Gene: Serenity_52 Start: 35106, Stop: 34903, Start Num: 17

Candidate Starts for Serenity_52:

(15, 35142), (Start: 17 @35106 has 139 MA's), (26, 35001),

Gene: ShayRa_58 Start: 35132, Stop: 34941, Start Num: 17

Candidate Starts for ShayRa_58:

(Start: 17 @35132 has 139 MA's), (28, 35009),

Gene: Sheen_39 Start: 30417, Stop: 30229, Start Num: 17

Candidate Starts for Sheen_39:

(Start: 17 @30417 has 139 MA's), (28, 30294), (30, 30270), (32, 30243), (33, 30240),

Gene: Smeagan_55 Start: 36608, Stop: 36405, Start Num: 17

Candidate Starts for Smeagan_55:

(8, 36842), (9, 36839), (12, 36803), (Start: 17 @36608 has 139 MA's), (22, 36539), (24, 36515),

Gene: SnapTap_52 Start: 35961, Stop: 35758, Start Num: 16

Candidate Starts for SnapTap_52:

(8, 36186), (12, 36147), (Start: 16 @35961 has 16 MA's), (24, 35868), (32, 35775),

Gene: SororFago_54 Start: 36861, Stop: 36658, Start Num: 17

Candidate Starts for SororFago_54:

(Start: 17 @36861 has 139 MA's), (19, 36840),

Gene: Soups_58 Start: 35371, Stop: 35180, Start Num: 17

Candidate Starts for Soups_58:

(Start: 17 @35371 has 139 MA's), (28, 35248),

Gene: Spouty_50 Start: 35939, Stop: 35736, Start Num: 17

Candidate Starts for Spouty_50:

(Start: 17 @35939 has 139 MA's), (25, 35837), (27, 35816),

Gene: StarStuff_54 Start: 35761, Stop: 35564, Start Num: 17
Candidate Starts for StarStuff_54:
(Start: 17 @35761 has 139 MA's),

Gene: Steamy_48 Start: 35429, Stop: 35226, Start Num: 17
Candidate Starts for Steamy_48:
(Start: 17 @35429 has 139 MA's),

Gene: Strosahl_57 Start: 34790, Stop: 34599, Start Num: 17
Candidate Starts for Strosahl_57:
(Start: 17 @34790 has 139 MA's), (28, 34667),

Gene: SweetiePie_52 Start: 36093, Stop: 35890, Start Num: 16
Candidate Starts for SweetiePie_52:
(8, 36318), (12, 36279), (Start: 16 @36093 has 16 MA's), (24, 36000), (32, 35907),

Gene: Switzerland_57 Start: 35271, Stop: 35080, Start Num: 17
Candidate Starts for Switzerland_57:
(Start: 17 @35271 has 139 MA's), (28, 35148),

Gene: TarsusIV_51 Start: 35933, Stop: 35730, Start Num: 17
Candidate Starts for TarsusIV_51:
(Start: 17 @35933 has 139 MA's), (26, 35828),

Gene: Timshel_38 Start: 30511, Stop: 30323, Start Num: 17
Candidate Starts for Timshel_38:
(Start: 17 @30511 has 139 MA's), (28, 30388), (32, 30337),

Gene: TipsytheTRex_48 Start: 35176, Stop: 34973, Start Num: 17
Candidate Starts for TipsytheTRex_48:
(15, 35212), (Start: 17 @35176 has 139 MA's), (26, 35071),

Gene: Toaka_52 Start: 35764, Stop: 35561, Start Num: 17
Candidate Starts for Toaka_52:
(Start: 17 @35764 has 139 MA's), (25, 35662), (27, 35641), (28, 35629),

Gene: Tomathan_54 Start: 35758, Stop: 35561, Start Num: 17
Candidate Starts for Tomathan_54:
(Start: 17 @35758 has 139 MA's),

Gene: Trixie_50 Start: 36033, Stop: 35842, Start Num: 16
Candidate Starts for Trixie_50:
(15, 36060), (Start: 16 @36033 has 16 MA's), (24, 35940), (25, 35931), (31, 35868),

Gene: Trooper_53 Start: 36313, Stop: 36110, Start Num: 17
Candidate Starts for Trooper_53:
(Start: 17 @36313 has 139 MA's), (24, 36220),

Gene: Tubs_52 Start: 35873, Stop: 35670, Start Num: 17
Candidate Starts for Tubs_52:
(Start: 17 @35873 has 139 MA's), (25, 35771), (27, 35750),

Gene: Turbido_53 Start: 36342, Stop: 36139, Start Num: 17

Candidate Starts for Turbido_53:
(8, 36576), (9, 36573), (12, 36537), (Start: 17 @36342 has 139 MA's), (24, 36249),

Gene: Ugenie5_49 Start: 36158, Stop: 35955, Start Num: 17
Candidate Starts for Ugenie5_49:
(Start: 17 @36158 has 139 MA's), (25, 36056), (27, 36035),

Gene: Updawg_53 Start: 36195, Stop: 35992, Start Num: 17
Candidate Starts for Updawg_53:
(Start: 17 @36195 has 139 MA's), (25, 36093), (29, 36042), (34, 36003),

Gene: VA6_53 Start: 36330, Stop: 36127, Start Num: 17
Candidate Starts for VA6_53:
(Start: 17 @36330 has 139 MA's), (25, 36228), (29, 36177),

Gene: VC3_55 Start: 36177, Stop: 35980, Start Num: 17
Candidate Starts for VC3_55:
(Start: 17 @36177 has 139 MA's),

Gene: Vanisoa_52 Start: 36794, Stop: 36591, Start Num: 17
Candidate Starts for Vanisoa_52:
(Start: 17 @36794 has 139 MA's), (23, 36704), (32, 36608),

Gene: Waits_57 Start: 34992, Stop: 34801, Start Num: 17
Candidate Starts for Waits_57:
(Start: 17 @34992 has 139 MA's), (28, 34869),

Gene: WeiHuaDA_54 Start: 36838, Stop: 36647, Start Num: 16
Candidate Starts for WeiHuaDA_54:
(15, 36865), (Start: 16 @36838 has 16 MA's), (24, 36745), (31, 36673), (32, 36664),

Gene: Whabigail7_53 Start: 36327, Stop: 36124, Start Num: 17
Candidate Starts for Whabigail7_53:
(8, 36561), (9, 36558), (12, 36522), (Start: 17 @36327 has 139 MA's), (24, 36234),

Gene: WideWale_53 Start: 36195, Stop: 35992, Start Num: 17
Candidate Starts for WideWale_53:
(Start: 17 @36195 has 139 MA's), (25, 36093), (29, 36042), (34, 36003),

Gene: XianYue_51 Start: 35699, Stop: 35502, Start Num: 17
Candidate Starts for XianYue_51:
(Start: 17 @35699 has 139 MA's), (24, 35606), (26, 35594),

Gene: Yecey3_53 Start: 35450, Stop: 35247, Start Num: 17
Candidate Starts for Yecey3_53:
(Start: 17 @35450 has 139 MA's), (21, 35390), (24, 35357), (28, 35315),

Gene: Zimmer_49 Start: 36619, Stop: 36413, Start Num: 17
Candidate Starts for Zimmer_49:
(Start: 17 @36619 has 139 MA's), (24, 36526),