

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 193784 Report

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

Pham number 193784 has 164 members, 15 are drafts.

Phages represented in each track:

- Track 1 : Edison31_44, Rebeuca_45, Topanga_43, WalterMcMickey_43, Kristoff_45, Twister_43
- Track 2 : Bachome_49, Sham4_47, Fibonacci_47, Petersenfast_46, Bud_47, Lucivia_48, Orange_47, Hutc2_47, Insomnia_48, Ebony_47, Mulciber_47, Snape_47, Jabith_48, Gilberta_48, Mabel_47, MaCh_48, Timothy_47, TinyTimmy_47, Salz_46, Et2Brutus_46
- Track 3 : Retro23_48, Georgie2_48, Crucio_47, Dignity_49, SemperFi_48, SweetiePie_47, Dalmatian_48, Turbido_48, Jerm_49
- Track 4 : Equemioh13_48, Buggy_49, MiculUcigas_47, Baehexic_46, Updawg_48, Centaur_48, WideWale_48, NaSiaTalie_47, Flare16_47
- Track 5 : Loser_49
- Track 6 : Heffalump_46, QueenB2_46, Fameo_47
- Track 7 : Agape74_49, AbbyPaige_49, Whabigail7_48, LilTurb_48
- Track 8 : Pomar16_49, Travvers_49, DBQu4n_49, Tomathan_49, Kerberos_49, Duplo_49, StarStuff_49
- Track 9 : SwirlSquare_52
- Track 10 : Phaded_48, Bactobuster_46
- Track 11 : AnnaL29_49, RedRock_49
- Track 12 : D29_46, D32_49, Naji_49
- Track 13 : BabyBack_46
- Track 14 : Smeagan_50, Leviathan_49
- Track 15 : BobSwaget_45
- Track 16 : CRB1_50, JoshKayV_49
- Track 17 : Pukovnik_46
- Track 18 : ChipMunk_49
- Track 19 : NothingSpecial_45
- Track 20 : Malec_47, Larenn_46
- Track 21 : BiancaTri92_47
- Track 22 : HarryHoudini_48, Piro94_47, Drake55_49
- Track 23 : Che12_49
- Track 24 : 20ES_49, First_0048
- Track 25 : Acolyte_43
- Track 26 : Miko_44, Rachaly_46
- Track 27 : NicoleTera_46
- Track 28 : FiringLine_47, Power_46, SnapTap_47, QueenBeesly_47
- Track 29 : Jsquared_45
- Track 30 : Trooper_48

- Track 31 : IronMan_47
- Track 32 : TipsytheTRex_44
- Track 33 : Colin_47, Kalpine_45
- Track 34 : Herbertwm_47
- Track 35 : Echild_47
- Track 36 : Ph8s_49, Adzzy_49
- Track 37 : ArcherNM_43
- Track 38 : Trixie_45
- Track 39 : KingCyrus_49
- Track 40 : EZMoney23_45
- Track 41 : Leogania_47
- Track 42 : Koduck_47, L5_46
- Track 43 : EvilGenius_49
- Track 44 : WeiHuaDA_49
- Track 45 : Lokk_46
- Track 46 : Serenity_47
- Track 47 : GaugeLDP_45
- Track 48 : Deloris_47
- Track 49 : Landor_47
- Track 50 : Changeling_46
- Track 51 : Iwokeuplikedis_50
- Track 52 : TarsusIV_45
- Track 53 : Kinmap_45
- Track 54 : Lilbunny_48, ToneTone_46, Wiks_48, Hammer_50, Blue7_51, Zaka_49, Indra_52, Zulu_49, WunderPhul_49, Rifter_50, Tucker_49, Jeffabunny_49, Gruunaga_49
- Track 55 : Artemis2UCLA_49, Isiphiwo_47, SuperAwesome_49, DaVinci_48, GreedyLawyer_49, Kipper29_49, Candra_49, Gladiator_47, SuperCallie99_48, VohminGhazi_49, Newrala_49, Cookiedough_49, Kazan_50, McFly_49, Dorothea_49, Roksolana_50, Chartreuse_48, Neeharika16_48, Pmask_49, CloudWang3_49, EricB_49, SmellyB_49
- Track 56 : Koko_50
- Track 57 : Garak_51, Helmet_51, Yokurt_49, Hexamo_49
- Track 58 : Priamo_50, Jordennis_48
- Track 59 : Blinn1_51

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

The start number called the most often in the published annotations is 13, it was called in 65 of the 149 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Adzzy_49, Artemis2UCLA_49, Baehexic_46, Blue7_51, Buggy_49, Candra_49, Centaur_48, Changeling_46, Chartreuse_48, Che12_49, CloudWang3_49, Colin_47, Cookiedough_49, D29_46, D32_49, DBQu4n_49, DaVinci_48, Dorothea_49, Duplo_49, Equemioh13_48, EricB_49, Flare16_47, Gladiator_47, GreedyLawyer_49, Gruunaga_49, Hammer_50, Herbertwm_47, Indra_52, Isiphiwo_47, Jeffabunny_49, Jordennis_48, Jsquared_45, Kalpine_45, Kazan_50, Kerberos_49, Kinmap_45, Kipper29_49, Koduck_47, Koko_50, L5_46, Lilbunny_48, McFly_49, MiculUcigas_47, NaSiaTalie_47, Naji_49, Neeharika16_48, Newrala_49, NothingSpecial_45,

Ph8s_49, Pmask_49, Pomar16_49, Priamo_50, Rifter_50, Roksolana_50, Serenity_47, SmellyB_49, StarStuff_49, SuperAwesome_49, SuperCallie99_48, SwirlSquare_52, TopsytheTRex_44, Tomathan_49, ToneTone_46, Travvers_49, Tucker_49, Updawg_48, VohminGhazi_49, WeiHuaDA_49, WideWale_48, Wiks_48, WunderPhul_49, Zaka_49, Zulu_49,

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

- 20ES_49, AbbyPaige_49, Agape74_49, AnnaL29_49, BiancaTri92_47, Blinn1_51, CRB1_50, Crucio_47, Dalmatian_48, Dignity_49, Drake55_49, Echild_47, EvilGenius_49, Fameo_47, FiringLine_47, First_0048, Garak_51, Georgie2_48, HarryHoudini_48, Heffalump_46, Helmet_51, Hexamo_49, Jerm_49, JoshKayV_49, Larenn_46, Leogania_47, Leviathan_49, LilTurb_48, Loser_49, Malec_47, Miko_44, NicoleTera_46, Piro94_47, Power_46, QueenB2_46, QueenBeesly_47, Rachaly_46, RedRock_49, Retro23_48, SemperFi_48, Smeagan_50, SnapTap_47, SweetiePie_47, Trooper_48, Turbido_48, Whabigail7_48, Yokurt_49,

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

- Acolyte_43, ArcherNM_43, BabyBack_46, Bachome_49, Bactobuster_46, BobSwaget_45, Bud_47, ChipMunk_49, Deloris_47, EZMoney23_45, Ebony_47, Edison31_44, Et2Brutus_46, Fibonacci_47, GaugeLDP_45, Gilberta_48, Hutc2_47, Insomnia_48, IronMan_47, Iwokeuplikedis_50, Jabith_48, KingCyrus_49, Kristoff_45, Landor_47, Lokk_46, Lucivia_48, MaCh_48, Mabel_47, Mulciber_47, Orange_47, Petersenfast_46, Phaded_48, Pukovnik_46, Rebeuca_45, Salz_46, Sham4_47, Snape_47, TarsusIV_45, Timothy_47, TinyTimmy_47, Topanga_43, Trixie_45, Twister_43, WalterMcMickey_43,

Summary by start number:

Start 5:

- Found in 2 of 164 (1.2%) of genes in pham
- Manual Annotations of this start: 2 of 149
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BobSwaget_45 (A2), Lokk_46 (A2),

Start 7:

- Found in 44 of 164 (26.8%) of genes in pham
- Manual Annotations of this start: 3 of 149
- Called 11.4% of time when present
- Phage (with cluster) where this start called: Blinn1_51 (A6), Garak_51 (A6), Helmet_51 (A6), Hexamo_49 (A6), Yokurt_49 (A6),

Start 9:

- Found in 11 of 164 (6.7%) of genes in pham
- Manual Annotations of this start: 11 of 149
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BiancaTri92_47 (A2), Echild_47 (A2), Fameo_47 (A2), FiringLine_47 (A2), Heffalump_46 (A2), Leogania_47 (A2), Power_46 (A2), QueenB2_46 (A2), QueenBeesly_47 (A2), SnapTap_47 (A2), Trooper_48 (A2),

Start 10:

- Found in 37 of 164 (22.6%) of genes in pham
- Manual Annotations of this start: 34 of 149

- Called 100.0% of time when present
- Phage (with cluster) where this start called: 20ES_49 (A2), AbbyPaige_49 (A2), Acolyte_43 (A2), Agape74_49 (A2), AnnaL29_49 (A2), CRB1_50 (A2), ChipMunk_49 (A2), Crucio_47 (A2), Dalmatian_48 (A2), Deloris_47 (A2), Dignity_49 (A2), Drake55_49 (A2), EvilGenius_49 (A2), First_0048 (A2), Georgie2_48 (A2), HarryHoudini_48 (A2), Iwokeuplikedis_50 (A2), Jerm_49 (A2), JoshKayV_49 (A2), KingCyrus_49 (A2), Larenn_46 (A2), Leviathan_49 (A2), LilTurb_48 (A2), Loser_49 (A2), Malec_47 (A2), Miko_44 (A2), NicoleTera_46 (A2), Piro94_47 (A2), Rachaly_46 (A2), RedRock_49 (A2), Retro23_48 (A2), SemperFi_48 (A2), Smeagan_50 (A2), SweetiePie_47 (A2), TarsusIV_45 (A2), Turbido_48 (A2), Whabigail7_48 (A2),

Start 11:

- Found in 3 of 164 (1.8%) of genes in pham
- Manual Annotations of this start: 2 of 149
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ArcherNM_43 (A2), EZMoney23_45 (A2), Trixie_45 (A2),

Start 12:

- Found in 7 of 164 (4.3%) of genes in pham
- Manual Annotations of this start: 7 of 149
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BabyBack_46 (A2), Bactobuster_46 (A2), GaugeLDP_45 (A2), IronMan_47 (A2), Landor_47 (A2), Phaded_48 (A2), Pukovnik_46 (A2),

Start 13:

- Found in 120 of 164 (73.2%) of genes in pham
- Manual Annotations of this start: 65 of 149
- Called 60.8% of time when present
- Phage (with cluster) where this start called: Adzzy_49 (A2), Artemis2UCLA_49 (A6), Baehexic_46 (A2), Blue7_51 (A6), Buggy_49 (A2), Candra_49 (A6), Centaur_48 (A2), Changeling_46 (A2), Chartreuse_48 (A6), Che12_49 (A2), CloudWang3_49 (A6), Colin_47 (A2), Cookiedough_49 (A6), D29_46 (A2), D32_49 (A2), DBQu4n_49 (A2), DaVinci_48 (A6), Dorothea_49 (A6), Duplo_49 (A2), Equemioh13_48 (A2), EricB_49 (A6), Flare16_47 (A2), Gladiator_47 (A6), GreedyLawyer_49 (A6), Gruunaga_49 (A6), Hammer_50 (A6), Herbertwm_47 (A2), Indra_52 (A6), Isiphiwo_47 (A6), Jeffabunny_49 (A6), Jordennis_48 (A6), Jsquared_45 (A2), Kalpine_45 (A2), Kazan_50 (A6), Kerberos_49 (A2), Kinmap_45 (A21), Kipper29_49 (A6), Koduck_47 (A2), Koko_50 (A6), L5_46 (A2), Lilbunny_48 (A6), McFly_49 (A6), MiculUcigas_47 (A2), NaSiaTalie_47 (A2), Naji_49 (A2), Neeharika16_48 (A6), Newrala_49 (A6), NothingSpecial_45 (A2), Ph8s_49 (A2), Pmask_49 (A6), Pomar16_49 (A2), Priamo_50 (A6), Rifter_50 (A6), Roksolana_50 (A6), Serenity_47 (A2), SmellyB_49 (A6), StarStuff_49 (A2), SuperAwesome_49 (A6), SuperCallie99_48 (A6), SwirlSquare_52 (A2), TopsytheTRex_44 (A2), Tomathan_49 (A2), ToneTone_46 (A6), Travvers_49 (A2), Tucker_49 (A6), Updawg_48 (A2), VohminGhazi_49 (A6), WeiHuaDA_49 (A2), WideWale_48 (A2), Wiks_48 (A6), WunderPhul_49 (A6), Zaka_49 (A6), Zulu_49 (A6),

Start 20:

- Found in 20 of 164 (12.2%) of genes in pham
- Manual Annotations of this start: 19 of 149
- Called 100.0% of time when present

- Phage (with cluster) where this start called: Bachome_49 (A11), Bud_47 (A11), Ebony_47 (A11), Et2Brutus_46 (A11), Fibonacci_47 (A11), Gilberta_48 (A11), Hutc2_47 (A11), Insomnia_48 (A11), Jabith_48 (A11), Lucivia_48 (A11), MaCh_48 (A11), Mabel_47 (A11), Mulciber_47 (A11), Orange_47 (A11), Petersenfast_46 (A11), Salz_46 (A11), Sham4_47 (A11), Snape_47 (A11), Timothy_47 (A11), TinyTimmy_47 (A11),

Start 33:

- Found in 6 of 164 (3.7%) of genes in pham
- Manual Annotations of this start: 6 of 149
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Edison31_44 (A10), Kristoff_45 (A10), Rebeuca_45 (A10), Topanga_43 (A10), Twister_43 (A10), WalterMcMickey_43 (A10),

Summary by clusters:

There are 5 clusters represented in this pham: A21, A2, A11, A10, A6,

Info for manual annotations of cluster A10:

- Start number 33 was manually annotated 6 times for cluster A10.

Info for manual annotations of cluster A11:

- Start number 20 was manually annotated 19 times for cluster A11.

Info for manual annotations of cluster A2:

- Start number 5 was manually annotated 2 times for cluster A2.
- Start number 9 was manually annotated 11 times for cluster A2.
- Start number 10 was manually annotated 34 times for cluster A2.
- Start number 11 was manually annotated 2 times for cluster A2.
- Start number 12 was manually annotated 7 times for cluster A2.
- Start number 13 was manually annotated 29 times for cluster A2.

Info for manual annotations of cluster A6:

- Start number 7 was manually annotated 3 times for cluster A6.
- Start number 13 was manually annotated 36 times for cluster A6.

Gene Information:

Gene: 20ES_49 Start: 32435, Stop: 32013, Start Num: 10

Candidate Starts for 20ES_49:

(Start: 10 @32435 has 34 MA's), (Start: 13 @32426 has 65 MA's), (60, 32060),

Gene: AbbyPaige_49 Start: 32616, Stop: 32194, Start Num: 10

Candidate Starts for AbbyPaige_49:

(Start: 10 @32616 has 34 MA's), (Start: 13 @32607 has 65 MA's), (24, 32514), (26, 32508), (60, 32241),

Gene: Acolyte_43 Start: 31589, Stop: 31182, Start Num: 10

Candidate Starts for Acolyte_43:

(Start: 10 @31589 has 34 MA's), (21, 31532), (27, 31484), (53, 31358), (60, 31229),

Gene: Adzzy_49 Start: 31071, Stop: 30643, Start Num: 13

Candidate Starts for Adzzy_49:

(6, 31107), (Start: 13 @31071 has 65 MA's), (58, 30723), (60, 30690),

Gene: Agape74_49 Start: 32601, Stop: 32179, Start Num: 10

Candidate Starts for Agape74_49:

(Start: 10 @32601 has 34 MA's), (Start: 13 @32592 has 65 MA's), (24, 32499), (26, 32493), (60, 32226),

Gene: AnnaL29_49 Start: 33146, Stop: 32724, Start Num: 10

Candidate Starts for AnnaL29_49:

(Start: 10 @33146 has 34 MA's), (Start: 13 @33137 has 65 MA's), (19, 33080), (24, 33044), (60, 32771),

Gene: ArcherNM_43 Start: 32185, Stop: 31778, Start Num: 11

Candidate Starts for ArcherNM_43:

(Start: 11 @32185 has 2 MA's), (26, 32107), (27, 32089), (51, 31972), (60, 31825), (62, 31798),

Gene: Artemis2UCLA_49 Start: 30834, Stop: 30406, Start Num: 13

Candidate Starts for Artemis2UCLA_49:

(Start: 7 @30861 has 3 MA's), (Start: 13 @30834 has 65 MA's), (25, 30738), (34, 30702), (50, 30612), (52, 30585), (53, 30582), (62, 30426),

Gene: BabyBack_46 Start: 32865, Stop: 32410, Start Num: 12

Candidate Starts for BabyBack_46:

(Start: 12 @32865 has 7 MA's), (14, 32838), (32, 32721), (49, 32625), (53, 32589), (55, 32577), (60, 32457), (62, 32430),

Gene: Bachome_49 Start: 31693, Stop: 31346, Start Num: 20

Candidate Starts for Bachome_49:

(Start: 20 @31693 has 19 MA's), (24, 31660), (31, 31639), (58, 31426), (60, 31393),

Gene: Bactobuster_46 Start: 33096, Stop: 32677, Start Num: 12

Candidate Starts for Bactobuster_46:

(Start: 12 @33096 has 7 MA's), (26, 33015), (41, 32952), (44, 32934), (51, 32880), (60, 32724),

Gene: Baehexic_46 Start: 32303, Stop: 31869, Start Num: 13

Candidate Starts for Baehexic_46:

(Start: 13 @32303 has 65 MA's), (26, 32204), (35, 32168), (60, 31916),

Gene: BiancaTri92_47 Start: 32931, Stop: 32509, Start Num: 9

Candidate Starts for BiancaTri92_47:

(Start: 9 @32931 has 11 MA's), (Start: 13 @32922 has 65 MA's), (26, 32844), (60, 32556),

Gene: Blinn1_51 Start: 31121, Stop: 30666, Start Num: 7

Candidate Starts for Blinn1_51:

(Start: 7 @31121 has 3 MA's), (Start: 13 @31094 has 65 MA's), (25, 30998), (34, 30962), (52, 30845), (60, 30713),

Gene: Blue7_51 Start: 30930, Stop: 30502, Start Num: 13

Candidate Starts for Blue7_51:

(Start: 7 @30957 has 3 MA's), (Start: 13 @30930 has 65 MA's), (25, 30834), (48, 30720), (53, 30678), (62, 30522),

Gene: BobSwaget_45 Start: 31896, Stop: 31399, Start Num: 5

Candidate Starts for BobSwaget_45:

(Start: 5 @31896 has 2 MA's), (30, 31704), (36, 31692), (49, 31617), (60, 31446),

Gene: Bud_47 Start: 31267, Stop: 30920, Start Num: 20

Candidate Starts for Bud_47:

(Start: 20 @31267 has 19 MA's), (24, 31234), (31, 31213), (58, 31000), (60, 30967),

Gene: Buggy_49 Start: 32673, Stop: 32239, Start Num: 13

Candidate Starts for Buggy_49:

(Start: 13 @32673 has 65 MA's), (26, 32574), (35, 32538), (60, 32286),

Gene: CRB1_50 Start: 32781, Stop: 32359, Start Num: 10

Candidate Starts for CRB1_50:

(Start: 10 @32781 has 34 MA's), (Start: 13 @32772 has 65 MA's), (24, 32679), (26, 32673), (37, 32649), (38, 32646), (60, 32406),

Gene: Candra_49 Start: 31173, Stop: 30745, Start Num: 13

Candidate Starts for Candra_49:

(Start: 7 @31200 has 3 MA's), (Start: 13 @31173 has 65 MA's), (25, 31077), (34, 31041), (50, 30951), (52, 30924), (53, 30921), (62, 30765),

Gene: Centaur_48 Start: 32520, Stop: 32086, Start Num: 13

Candidate Starts for Centaur_48:

(Start: 13 @32520 has 65 MA's), (26, 32421), (35, 32385), (60, 32133),

Gene: Changeling_46 Start: 32725, Stop: 32312, Start Num: 13

Candidate Starts for Changeling_46:

(Start: 13 @32725 has 65 MA's), (26, 32647), (37, 32602), (59, 32371), (60, 32359), (62, 32332),

Gene: Chartreuse_48 Start: 30533, Stop: 30105, Start Num: 13

Candidate Starts for Chartreuse_48:

(Start: 7 @30560 has 3 MA's), (Start: 13 @30533 has 65 MA's), (25, 30437), (34, 30401), (50, 30311), (52, 30284), (53, 30281), (62, 30125),

Gene: Che12_49 Start: 31155, Stop: 30727, Start Num: 13

Candidate Starts for Che12_49:

(Start: 13 @31155 has 65 MA's), (28, 31044), (41, 30993), (58, 30807), (60, 30774),

Gene: ChipMunk_49 Start: 33873, Stop: 33451, Start Num: 10

Candidate Starts for ChipMunk_49:

(Start: 10 @33873 has 34 MA's), (24, 33771), (36, 33744), (60, 33498),

Gene: CloudWang3_49 Start: 30934, Stop: 30506, Start Num: 13

Candidate Starts for CloudWang3_49:

(Start: 7 @30961 has 3 MA's), (Start: 13 @30934 has 65 MA's), (25, 30838), (34, 30802), (50, 30712), (52, 30685), (53, 30682), (62, 30526),

Gene: Colin_47 Start: 32497, Stop: 32084, Start Num: 13

Candidate Starts for Colin_47:

(Start: 13 @32497 has 65 MA's), (26, 32419), (60, 32131),

Gene: Cookie dough_49 Start: 31149, Stop: 30721, Start Num: 13

Candidate Starts for Cookie dough_49:

(Start: 7 @31176 has 3 MA's), (Start: 13 @31149 has 65 MA's), (25, 31053), (34, 31017), (50, 30927), (52, 30900), (53, 30897), (62, 30741),

Gene: Crucio_47 Start: 32116, Stop: 31694, Start Num: 10

Candidate Starts for Crucio_47:

(Start: 10 @32116 has 34 MA's), (Start: 13 @32107 has 65 MA's), (24, 32014), (37, 31984), (60, 31741),

Gene: D29_46 Start: 31906, Stop: 31496, Start Num: 13

Candidate Starts for D29_46:

(4, 32113), (Start: 13 @31906 has 65 MA's), (36, 31786), (42, 31762), (43, 31756), (56, 31663), (58, 31576), (60, 31543),

Gene: D32_49 Start: 31906, Stop: 31496, Start Num: 13

Candidate Starts for D32_49:

(4, 32113), (Start: 13 @31906 has 65 MA's), (36, 31786), (42, 31762), (43, 31756), (56, 31663), (58, 31576), (60, 31543),

Gene: DBQu4n_49 Start: 31906, Stop: 31496, Start Num: 13

Candidate Starts for DBQu4n_49:

(2, 32233), (3, 32221), (Start: 13 @31906 has 65 MA's), (36, 31786), (42, 31762), (43, 31756), (56, 31663), (58, 31576), (60, 31543),

Gene: DaVinci_48 Start: 30587, Stop: 30159, Start Num: 13

Candidate Starts for DaVinci_48:

(Start: 7 @30614 has 3 MA's), (Start: 13 @30587 has 65 MA's), (25, 30491), (34, 30455), (50, 30365), (52, 30338), (53, 30335), (62, 30179),

Gene: Dalmatian_48 Start: 32508, Stop: 32086, Start Num: 10

Candidate Starts for Dalmatian_48:

(Start: 10 @32508 has 34 MA's), (Start: 13 @32499 has 65 MA's), (24, 32406), (37, 32376), (60, 32133),

Gene: Deloris_47 Start: 32057, Stop: 31644, Start Num: 10

Candidate Starts for Deloris_47:

(Start: 10 @32057 has 34 MA's), (23, 31967), (26, 31958), (40, 31922), (50, 31856), (60, 31691),

Gene: Dignity_49 Start: 32681, Stop: 32259, Start Num: 10

Candidate Starts for Dignity_49:

(Start: 10 @32681 has 34 MA's), (Start: 13 @32672 has 65 MA's), (24, 32579), (37, 32549), (60, 32306),

Gene: Dorothea_49 Start: 31156, Stop: 30728, Start Num: 13

Candidate Starts for Dorothea_49:

(Start: 7 @31183 has 3 MA's), (Start: 13 @31156 has 65 MA's), (25, 31060), (34, 31024), (50, 30934), (52, 30907), (53, 30904), (62, 30748),

Gene: Drake55_49 Start: 32605, Stop: 32183, Start Num: 10

Candidate Starts for Drake55_49:

(Start: 10 @32605 has 34 MA's), (Start: 13 @32596 has 65 MA's), (24, 32503), (26, 32497), (37, 32473), (60, 32230),

Gene: Duplo_49 Start: 31944, Stop: 31534, Start Num: 13

Candidate Starts for Duplo_49:

(2, 32271), (3, 32259), (Start: 13 @31944 has 65 MA's), (36, 31824), (42, 31800), (43, 31794), (56, 31701), (58, 31614), (60, 31581),

Gene: EZMoney23_45 Start: 32055, Stop: 31642, Start Num: 11

Candidate Starts for EZMoney23_45:

(Start: 11 @32055 has 2 MA's), (26, 31977), (27, 31959), (37, 31932), (60, 31689),

Gene: Ebony_47 Start: 31284, Stop: 30937, Start Num: 20

Candidate Starts for Ebony_47:

(Start: 20 @31284 has 19 MA's), (24, 31251), (31, 31230), (58, 31017), (60, 30984),

Gene: Echild_47 Start: 31587, Stop: 31165, Start Num: 9

Candidate Starts for Echild_47:

(Start: 9 @31587 has 11 MA's), (Start: 13 @31578 has 65 MA's), (26, 31500), (60, 31212),

Gene: Edison31_44 Start: 31487, Stop: 31149, Start Num: 33

Candidate Starts for Edison31_44:

(8, 31631), (15, 31580), (Start: 33 @31487 has 6 MA's), (53, 31337), (56, 31322), (57, 31244),

Gene: Equemioh13_48 Start: 32422, Stop: 31988, Start Num: 13

Candidate Starts for Equemioh13_48:

(Start: 13 @32422 has 65 MA's), (26, 32323), (35, 32287), (60, 32035),

Gene: EricB_49 Start: 31130, Stop: 30702, Start Num: 13

Candidate Starts for EricB_49:

(Start: 7 @31157 has 3 MA's), (Start: 13 @31130 has 65 MA's), (25, 31034), (34, 30998), (50, 30908), (52, 30881), (53, 30878), (62, 30722),

Gene: Et2Brutus_46 Start: 31244, Stop: 30897, Start Num: 20

Candidate Starts for Et2Brutus_46:

(Start: 20 @31244 has 19 MA's), (24, 31211), (31, 31190), (58, 30977), (60, 30944),

Gene: EvilGenius_49 Start: 33877, Stop: 33455, Start Num: 10

Candidate Starts for EvilGenius_49:

(Start: 10 @33877 has 34 MA's), (Start: 13 @33868 has 65 MA's), (24, 33775), (36, 33748), (60, 33502),

Gene: Fameo_47 Start: 32426, Stop: 32004, Start Num: 9

Candidate Starts for Fameo_47:

(Start: 9 @32426 has 11 MA's), (Start: 13 @32417 has 65 MA's), (19, 32381), (26, 32339), (60, 32051),

Gene: Fibonacci_47 Start: 31259, Stop: 30912, Start Num: 20

Candidate Starts for Fibonacci_47:

(Start: 20 @31259 has 19 MA's), (24, 31226), (31, 31205), (58, 30992), (60, 30959),

Gene: FiringLine_47 Start: 32097, Stop: 31675, Start Num: 9

Candidate Starts for FiringLine_47:

(Start: 9 @32097 has 11 MA's), (Start: 13 @32088 has 65 MA's), (19, 32052), (26, 32010), (60, 31722),

Gene: First_0048 Start: 32311, Stop: 31889, Start Num: 10

Candidate Starts for First_0048:

(Start: 10 @32311 has 34 MA's), (Start: 13 @32302 has 65 MA's), (60, 31936),

Gene: Flare16_47 Start: 32181, Stop: 31747, Start Num: 13

Candidate Starts for Flare16_47:

(Start: 13 @32181 has 65 MA's), (26, 32082), (35, 32046), (60, 31794),

Gene: Garak_51 Start: 31328, Stop: 30873, Start Num: 7

Candidate Starts for Garak_51:

(Start: 7 @31328 has 3 MA's), (Start: 13 @31301 has 65 MA's), (25, 31205), (48, 31091), (53, 31049), (62, 30893),

Gene: GaugeLDP_45 Start: 32488, Stop: 32036, Start Num: 12

Candidate Starts for GaugeLDP_45:

(Start: 7 @32512 has 3 MA's), (Start: 12 @32488 has 7 MA's), (19, 32428), (32, 32344), (60, 32083),

Gene: Georgie2_48 Start: 32142, Stop: 31720, Start Num: 10

Candidate Starts for Georgie2_48:

(Start: 10 @32142 has 34 MA's), (Start: 13 @32133 has 65 MA's), (24, 32040), (37, 32010), (60, 31767),

Gene: Gilberta_48 Start: 31696, Stop: 31349, Start Num: 20

Candidate Starts for Gilberta_48:

(Start: 20 @31696 has 19 MA's), (24, 31663), (31, 31642), (58, 31429), (60, 31396),

Gene: Gladiator_47 Start: 30461, Stop: 30033, Start Num: 13

Candidate Starts for Gladiator_47:

(Start: 7 @30488 has 3 MA's), (Start: 13 @30461 has 65 MA's), (25, 30365), (34, 30329), (50, 30239), (52, 30212), (53, 30209), (62, 30053),

Gene: GreedyLawyer_49 Start: 31137, Stop: 30709, Start Num: 13

Candidate Starts for GreedyLawyer_49:

(Start: 7 @31164 has 3 MA's), (Start: 13 @31137 has 65 MA's), (25, 31041), (34, 31005), (50, 30915), (52, 30888), (53, 30885), (62, 30729),

Gene: Gruunaga_49 Start: 31137, Stop: 30709, Start Num: 13

Candidate Starts for Gruunaga_49:

(Start: 7 @31164 has 3 MA's), (Start: 13 @31137 has 65 MA's), (25, 31041), (48, 30927), (53, 30885), (62, 30729),

Gene: Hammer_50 Start: 30740, Stop: 30312, Start Num: 13

Candidate Starts for Hammer_50:

(Start: 7 @30767 has 3 MA's), (Start: 13 @30740 has 65 MA's), (25, 30644), (48, 30530), (53, 30488), (62, 30332),

Gene: HarryHoudini_48 Start: 32614, Stop: 32192, Start Num: 10

Candidate Starts for HarryHoudini_48:

(Start: 10 @32614 has 34 MA's), (Start: 13 @32605 has 65 MA's), (24, 32512), (26, 32506), (37, 32482), (60, 32239),

Gene: Heffalump_46 Start: 32894, Stop: 32472, Start Num: 9

Candidate Starts for Heffalump_46:

(Start: 9 @32894 has 11 MA's), (Start: 13 @32885 has 65 MA's), (19, 32849), (26, 32807), (60, 32519),

Gene: Helmet_51 Start: 31328, Stop: 30873, Start Num: 7

Candidate Starts for Helmet_51:

(Start: 7 @31328 has 3 MA's), (Start: 13 @31301 has 65 MA's), (25, 31205), (48, 31091), (53, 31049), (62, 30893),

Gene: Herbertwm_47 Start: 31973, Stop: 31524, Start Num: 13

Candidate Starts for Herbertwm_47:

(Start: 13 @31973 has 65 MA's), (19, 31916), (27, 31856), (52, 31703), (54, 31697), (58, 31604), (62, 31544),

Gene: Hexamo_49 Start: 30949, Stop: 30494, Start Num: 7

Candidate Starts for Hexamo_49:

(Start: 7 @30949 has 3 MA's), (Start: 13 @30922 has 65 MA's), (25, 30826), (48, 30712), (53, 30670), (62, 30514),

Gene: Hutc2_47 Start: 31259, Stop: 30912, Start Num: 20

Candidate Starts for Hutc2_47:

(Start: 20 @31259 has 19 MA's), (24, 31226), (31, 31205), (58, 30992), (60, 30959),

Gene: Indra_52 Start: 31302, Stop: 30874, Start Num: 13

Candidate Starts for Indra_52:

(Start: 7 @31329 has 3 MA's), (Start: 13 @31302 has 65 MA's), (25, 31206), (48, 31092), (53, 31050), (62, 30894),

Gene: Insomnia_48 Start: 31764, Stop: 31417, Start Num: 20

Candidate Starts for Insomnia_48:

(Start: 20 @31764 has 19 MA's), (24, 31731), (31, 31710), (58, 31497), (60, 31464),

Gene: IronMan_47 Start: 33279, Stop: 32860, Start Num: 12

Candidate Starts for IronMan_47:

(Start: 12 @33279 has 7 MA's), (26, 33198), (42, 33132), (44, 33117), (51, 33063), (60, 32907), (62, 32880),

Gene: Isiphiwo_47 Start: 30674, Stop: 30246, Start Num: 13

Candidate Starts for Isiphiwo_47:

(Start: 7 @30701 has 3 MA's), (Start: 13 @30674 has 65 MA's), (25, 30578), (34, 30542), (50, 30452), (52, 30425), (53, 30422), (62, 30266),

Gene: Iwokeuplikedis_50 Start: 32216, Stop: 31788, Start Num: 10

Candidate Starts for Iwokeuplikedis_50:

(Start: 10 @32216 has 34 MA's), (52, 31967), (60, 31835),

Gene: Jabith_48 Start: 31765, Stop: 31418, Start Num: 20

Candidate Starts for Jabith_48:

(Start: 20 @31765 has 19 MA's), (24, 31732), (31, 31711), (58, 31498), (60, 31465),

Gene: Jeffabunny_49 Start: 30958, Stop: 30530, Start Num: 13

Candidate Starts for Jeffabunny_49:

(Start: 7 @30985 has 3 MA's), (Start: 13 @30958 has 65 MA's), (25, 30862), (48, 30748), (53, 30706), (62, 30550),

Gene: Jerm_49 Start: 32674, Stop: 32252, Start Num: 10

Candidate Starts for Jerm_49:

(Start: 10 @32674 has 34 MA's), (Start: 13 @32665 has 65 MA's), (24, 32572), (37, 32542), (60, 32299),

Gene: Jordennis_48 Start: 30594, Stop: 30166, Start Num: 13

Candidate Starts for Jordennis_48:

(Start: 7 @30621 has 3 MA's), (Start: 13 @30594 has 65 MA's), (25, 30498), (34, 30462), (50, 30372), (52, 30345), (53, 30342),

Gene: JoshKayV_49 Start: 32755, Stop: 32333, Start Num: 10

Candidate Starts for JoshKayV_49:

(Start: 10 @32755 has 34 MA's), (Start: 13 @32746 has 65 MA's), (24, 32653), (26, 32647), (37, 32623), (38, 32620), (60, 32380),

Gene: Jsquared_45 Start: 31025, Stop: 30618, Start Num: 13

Candidate Starts for Jsquared_45:

(Start: 13 @31025 has 65 MA's), (32, 30926), (36, 30905), (58, 30698), (60, 30665),

Gene: Kalpine_45 Start: 32395, Stop: 31982, Start Num: 13

Candidate Starts for Kalpine_45:

(Start: 13 @32395 has 65 MA's), (26, 32317), (60, 32029),

Gene: Kazan_50 Start: 31143, Stop: 30715, Start Num: 13

Candidate Starts for Kazan_50:

(Start: 7 @31170 has 3 MA's), (Start: 13 @31143 has 65 MA's), (25, 31047), (34, 31011), (50, 30921), (52, 30894), (53, 30891), (62, 30735),

Gene: Kerberos_49 Start: 31906, Stop: 31496, Start Num: 13

Candidate Starts for Kerberos_49:

(2, 32233), (3, 32221), (Start: 13 @31906 has 65 MA's), (36, 31786), (42, 31762), (43, 31756), (56, 31663), (58, 31576), (60, 31543),

Gene: KingCyrus_49 Start: 33872, Stop: 33450, Start Num: 10

Candidate Starts for KingCyrus_49:

(Start: 10 @33872 has 34 MA's), (24, 33770), (36, 33743), (60, 33497), (61, 33473),

Gene: Kinmap_45 Start: 31426, Stop: 31016, Start Num: 13

Candidate Starts for Kinmap_45:

(Start: 13 @31426 has 65 MA's), (46, 31252), (49, 31231), (58, 31096),

Gene: Kipper29_49 Start: 31156, Stop: 30728, Start Num: 13

Candidate Starts for Kipper29_49:

(Start: 7 @31183 has 3 MA's), (Start: 13 @31156 has 65 MA's), (25, 31060), (34, 31024), (50, 30934), (52, 30907), (53, 30904), (62, 30748),

Gene: Koduck_47 Start: 31317, Stop: 30889, Start Num: 13

Candidate Starts for Koduck_47:

(Start: 13 @31317 has 65 MA's), (18, 31263), (22, 31239), (32, 31197), (36, 31176), (41, 31155), (45, 31134), (58, 30969), (60, 30936),

Gene: Koko_50 Start: 31279, Stop: 30851, Start Num: 13

Candidate Starts for Koko_50:

(Start: 7 @31306 has 3 MA's), (Start: 13 @31279 has 65 MA's), (25, 31183), (53, 31027), (62, 30871),

Gene: Kristoff_45 Start: 31839, Stop: 31501, Start Num: 33

Candidate Starts for Kristoff_45:

(8, 31983), (15, 31932), (Start: 33 @31839 has 6 MA's), (53, 31689), (56, 31674), (57, 31596),

Gene: L5_46 Start: 31389, Stop: 30961, Start Num: 13

Candidate Starts for L5_46:

(Start: 13 @31389 has 65 MA's), (18, 31335), (22, 31311), (32, 31269), (36, 31248), (41, 31227), (45, 31206), (58, 31041), (60, 31008),

Gene: Landor_47 Start: 33357, Stop: 32938, Start Num: 12

Candidate Starts for Landor_47:

(Start: 12 @33357 has 7 MA's), (26, 33276), (41, 33213), (51, 33141), (60, 32985),

Gene: Larenn_46 Start: 32287, Stop: 31865, Start Num: 10

Candidate Starts for Larenn_46:

(Start: 10 @32287 has 34 MA's), (Start: 13 @32278 has 65 MA's), (19, 32221), (30, 32170), (60, 31912),

Gene: Leogania_47 Start: 33298, Stop: 32876, Start Num: 9

Candidate Starts for Leogania_47:

(Start: 9 @33298 has 11 MA's), (Start: 13 @33289 has 65 MA's), (26, 33211), (60, 32923),

Gene: Leviathan_49 Start: 32730, Stop: 32308, Start Num: 10

Candidate Starts for Leviathan_49:

(Start: 10 @32730 has 34 MA's), (Start: 13 @32721 has 65 MA's), (24, 32628), (26, 32622), (37, 32598), (60, 32355),

Gene: LilTurb_48 Start: 32563, Stop: 32141, Start Num: 10

Candidate Starts for LilTurb_48:

(Start: 10 @32563 has 34 MA's), (Start: 13 @32554 has 65 MA's), (24, 32461), (26, 32455), (60, 32188),

Gene: Lilbunny_48 Start: 30932, Stop: 30504, Start Num: 13

Candidate Starts for Lilbunny_48:

(Start: 7 @30959 has 3 MA's), (Start: 13 @30932 has 65 MA's), (25, 30836), (48, 30722), (53, 30680), (62, 30524),

Gene: Lokk_46 Start: 32421, Stop: 31924, Start Num: 5

Candidate Starts for Lokk_46:

(Start: 5 @32421 has 2 MA's), (30, 32229), (36, 32217), (47, 32154), (49, 32142), (60, 31971),

Gene: Loser_49 Start: 33095, Stop: 32673, Start Num: 10

Candidate Starts for Loser_49:

(1, 33422), (Start: 10 @33095 has 34 MA's), (Start: 13 @33086 has 65 MA's), (19, 33029), (24, 32993), (60, 32720),

Gene: Lucivia_48 Start: 31754, Stop: 31407, Start Num: 20
Candidate Starts for Lucivia_48:
(Start: 20 @31754 has 19 MA's), (24, 31721), (31, 31700), (58, 31487), (60, 31454),

Gene: MaCh_48 Start: 31692, Stop: 31345, Start Num: 20
Candidate Starts for MaCh_48:
(Start: 20 @31692 has 19 MA's), (24, 31659), (31, 31638), (58, 31425), (60, 31392),

Gene: Mabel_47 Start: 31294, Stop: 30947, Start Num: 20
Candidate Starts for Mabel_47:
(Start: 20 @31294 has 19 MA's), (24, 31261), (31, 31240), (58, 31027), (60, 30994),

Gene: Malec_47 Start: 32851, Stop: 32429, Start Num: 10
Candidate Starts for Malec_47:
(Start: 10 @32851 has 34 MA's), (Start: 13 @32842 has 65 MA's), (19, 32785), (30, 32734), (60, 32476),

Gene: McFly_49 Start: 31137, Stop: 30709, Start Num: 13
Candidate Starts for McFly_49:
(Start: 7 @31164 has 3 MA's), (Start: 13 @31137 has 65 MA's), (25, 31041), (34, 31005), (50, 30915), (52, 30888), (53, 30885), (62, 30729),

Gene: MiculUcigas_47 Start: 32081, Stop: 31647, Start Num: 13
Candidate Starts for MiculUcigas_47:
(Start: 13 @32081 has 65 MA's), (26, 31982), (35, 31946), (60, 31694),

Gene: Miko_44 Start: 32243, Stop: 31821, Start Num: 10
Candidate Starts for Miko_44:
(Start: 10 @32243 has 34 MA's), (Start: 13 @32234 has 65 MA's), (30, 32126), (36, 32114), (49, 32039), (60, 31868),

Gene: Mulciber_47 Start: 31256, Stop: 30909, Start Num: 20
Candidate Starts for Mulciber_47:
(Start: 20 @31256 has 19 MA's), (24, 31223), (31, 31202), (58, 30989), (60, 30956),

Gene: NaSiaTalie_47 Start: 32178, Stop: 31744, Start Num: 13
Candidate Starts for NaSiaTalie_47:
(Start: 13 @32178 has 65 MA's), (26, 32079), (35, 32043), (60, 31791),

Gene: Naji_49 Start: 31906, Stop: 31496, Start Num: 13
Candidate Starts for Naji_49:
(4, 32113), (Start: 13 @31906 has 65 MA's), (36, 31786), (42, 31762), (43, 31756), (56, 31663), (58, 31576), (60, 31543),

Gene: Neeharika16_48 Start: 30597, Stop: 30169, Start Num: 13
Candidate Starts for Neeharika16_48:
(Start: 7 @30624 has 3 MA's), (Start: 13 @30597 has 65 MA's), (25, 30501), (34, 30465), (50, 30375), (52, 30348), (53, 30345), (62, 30189),

Gene: Newrala_49 Start: 31148, Stop: 30720, Start Num: 13
Candidate Starts for Newrala_49:
(Start: 7 @31175 has 3 MA's), (Start: 13 @31148 has 65 MA's), (25, 31052), (34, 31016), (50, 30926), (52, 30899), (53, 30896), (62, 30740),

Gene: NicoleTera_46 Start: 32449, Stop: 32027, Start Num: 10
Candidate Starts for NicoleTera_46:
(Start: 10 @32449 has 34 MA's), (Start: 13 @32440 has 65 MA's), (16, 32401), (40, 32305), (62, 32047),

Gene: NothingSpecial_45 Start: 32705, Stop: 32271, Start Num: 13
Candidate Starts for NothingSpecial_45:
(Start: 13 @32705 has 65 MA's), (26, 32606), (60, 32318),

Gene: Orange_47 Start: 31254, Stop: 30907, Start Num: 20
Candidate Starts for Orange_47:
(Start: 20 @31254 has 19 MA's), (24, 31221), (31, 31200), (58, 30987), (60, 30954),

Gene: Petersenfast_46 Start: 31261, Stop: 30914, Start Num: 20
Candidate Starts for Petersenfast_46:
(Start: 20 @31261 has 19 MA's), (24, 31228), (31, 31207), (58, 30994), (60, 30961),

Gene: Ph8s_49 Start: 31506, Stop: 31078, Start Num: 13
Candidate Starts for Ph8s_49:
(6, 31542), (Start: 13 @31506 has 65 MA's), (58, 31158), (60, 31125),

Gene: Phaded_48 Start: 33339, Stop: 32920, Start Num: 12
Candidate Starts for Phaded_48:
(Start: 12 @33339 has 7 MA's), (26, 33258), (41, 33195), (44, 33177), (51, 33123), (60, 32967),

Gene: Piro94_47 Start: 32531, Stop: 32109, Start Num: 10
Candidate Starts for Piro94_47:
(Start: 10 @32531 has 34 MA's), (Start: 13 @32522 has 65 MA's), (24, 32429), (26, 32423), (37, 32399), (60, 32156),

Gene: Pmask_49 Start: 31149, Stop: 30721, Start Num: 13
Candidate Starts for Pmask_49:
(Start: 7 @31176 has 3 MA's), (Start: 13 @31149 has 65 MA's), (25, 31053), (34, 31017), (50, 30927), (52, 30900), (53, 30897), (62, 30741),

Gene: Pomar16_49 Start: 31947, Stop: 31537, Start Num: 13
Candidate Starts for Pomar16_49:
(2, 32274), (3, 32262), (Start: 13 @31947 has 65 MA's), (36, 31827), (42, 31803), (43, 31797), (56, 31704), (58, 31617), (60, 31584),

Gene: Power_46 Start: 32150, Stop: 31728, Start Num: 9
Candidate Starts for Power_46:
(Start: 9 @32150 has 11 MA's), (Start: 13 @32141 has 65 MA's), (19, 32105), (26, 32063), (60, 31775),

Gene: Priamo_50 Start: 30766, Stop: 30338, Start Num: 13
Candidate Starts for Priamo_50:
(Start: 7 @30793 has 3 MA's), (Start: 13 @30766 has 65 MA's), (25, 30670), (34, 30634), (50, 30544), (52, 30517), (53, 30514),

Gene: Pukovnik_46 Start: 32944, Stop: 32528, Start Num: 12
Candidate Starts for Pukovnik_46:

(Start: 12 @32944 has 7 MA's), (17, 32914), (26, 32866), (37, 32821), (47, 32761), (51, 32731), (60, 32575),

Gene: QueenB2_46 Start: 32110, Stop: 31688, Start Num: 9

Candidate Starts for QueenB2_46:

(Start: 9 @32110 has 11 MA's), (Start: 13 @32101 has 65 MA's), (19, 32065), (26, 32023), (60, 31735),

Gene: QueenBeesly_47 Start: 32097, Stop: 31675, Start Num: 9

Candidate Starts for QueenBeesly_47:

(Start: 9 @32097 has 11 MA's), (Start: 13 @32088 has 65 MA's), (19, 32052), (26, 32010), (60, 31722),

Gene: Rachaly_46 Start: 32420, Stop: 31998, Start Num: 10

Candidate Starts for Rachaly_46:

(Start: 10 @32420 has 34 MA's), (Start: 13 @32411 has 65 MA's), (30, 32303), (36, 32291), (49, 32216), (60, 32045),

Gene: Rebeuca_45 Start: 31840, Stop: 31502, Start Num: 33

Candidate Starts for Rebeuca_45:

(8, 31984), (15, 31933), (Start: 33 @31840 has 6 MA's), (53, 31690), (56, 31675), (57, 31597),

Gene: RedRock_49 Start: 33308, Stop: 32886, Start Num: 10

Candidate Starts for RedRock_49:

(Start: 10 @33308 has 34 MA's), (Start: 13 @33299 has 65 MA's), (19, 33242), (24, 33206), (60, 32933),

Gene: Retro23_48 Start: 32504, Stop: 32082, Start Num: 10

Candidate Starts for Retro23_48:

(Start: 10 @32504 has 34 MA's), (Start: 13 @32495 has 65 MA's), (24, 32402), (37, 32372), (60, 32129),

Gene: Rifter_50 Start: 30703, Stop: 30275, Start Num: 13

Candidate Starts for Rifter_50:

(Start: 7 @30730 has 3 MA's), (Start: 13 @30703 has 65 MA's), (25, 30607), (48, 30493), (53, 30451), (62, 30295),

Gene: Roksolana_50 Start: 31185, Stop: 30757, Start Num: 13

Candidate Starts for Roksolana_50:

(Start: 7 @31212 has 3 MA's), (Start: 13 @31185 has 65 MA's), (25, 31089), (34, 31053), (50, 30963), (52, 30936), (53, 30933), (62, 30777),

Gene: Salz_46 Start: 31232, Stop: 30885, Start Num: 20

Candidate Starts for Salz_46:

(Start: 20 @31232 has 19 MA's), (24, 31199), (31, 31178), (58, 30965), (60, 30932),

Gene: SemperFi_48 Start: 32365, Stop: 31943, Start Num: 10

Candidate Starts for SemperFi_48:

(Start: 10 @32365 has 34 MA's), (Start: 13 @32356 has 65 MA's), (24, 32263), (37, 32233), (60, 31990),

Gene: Serenity_47 Start: 31249, Stop: 30842, Start Num: 13

Candidate Starts for Serenity_47:

(Start: 13 @31249 has 65 MA's), (47, 31066), (52, 31021), (58, 30922), (60, 30889),

Gene: Sham4_47 Start: 31260, Stop: 30913, Start Num: 20

Candidate Starts for Sham4_47:

(Start: 20 @31260 has 19 MA's), (24, 31227), (31, 31206), (58, 30993), (60, 30960),

Gene: Smeagan_50 Start: 32817, Stop: 32395, Start Num: 10

Candidate Starts for Smeagan_50:

(Start: 10 @32817 has 34 MA's), (Start: 13 @32808 has 65 MA's), (24, 32715), (26, 32709), (37, 32685), (60, 32442),

Gene: SmellyB_49 Start: 31137, Stop: 30709, Start Num: 13

Candidate Starts for SmellyB_49:

(Start: 7 @31164 has 3 MA's), (Start: 13 @31137 has 65 MA's), (25, 31041), (34, 31005), (50, 30915), (52, 30888), (53, 30885), (62, 30729),

Gene: SnapTap_47 Start: 32176, Stop: 31754, Start Num: 9

Candidate Starts for SnapTap_47:

(Start: 9 @32176 has 11 MA's), (Start: 13 @32167 has 65 MA's), (19, 32131), (26, 32089), (60, 31801),

Gene: Snape_47 Start: 31258, Stop: 30911, Start Num: 20

Candidate Starts for Snape_47:

(Start: 20 @31258 has 19 MA's), (24, 31225), (31, 31204), (58, 30991), (60, 30958),

Gene: StarStuff_49 Start: 31909, Stop: 31499, Start Num: 13

Candidate Starts for StarStuff_49:

(2, 32236), (3, 32224), (Start: 13 @31909 has 65 MA's), (36, 31789), (42, 31765), (43, 31759), (56, 31666), (58, 31579), (60, 31546),

Gene: SuperAwesome_49 Start: 31148, Stop: 30720, Start Num: 13

Candidate Starts for SuperAwesome_49:

(Start: 7 @31175 has 3 MA's), (Start: 13 @31148 has 65 MA's), (25, 31052), (34, 31016), (50, 30926), (52, 30899), (53, 30896), (62, 30740),

Gene: SuperCallie99_48 Start: 31021, Stop: 30593, Start Num: 13

Candidate Starts for SuperCallie99_48:

(Start: 7 @31048 has 3 MA's), (Start: 13 @31021 has 65 MA's), (25, 30925), (34, 30889), (50, 30799), (52, 30772), (53, 30769), (62, 30613),

Gene: SweetiePie_47 Start: 32305, Stop: 31883, Start Num: 10

Candidate Starts for SweetiePie_47:

(Start: 10 @32305 has 34 MA's), (Start: 13 @32296 has 65 MA's), (24, 32203), (37, 32173), (60, 31930),

Gene: SwirlSquare_52 Start: 31390, Stop: 30980, Start Num: 13

Candidate Starts for SwirlSquare_52:

(Start: 13 @31390 has 65 MA's), (25, 31300), (29, 31285), (39, 31258), (42, 31246), (43, 31240), (49, 31195), (58, 31060), (60, 31027),

Gene: TarsusIV_45 Start: 31964, Stop: 31542, Start Num: 10

Candidate Starts for TarsusIV_45:

(Start: 10 @31964 has 34 MA's), (30, 31847), (36, 31835), (60, 31589),

Gene: Timothy_47 Start: 31235, Stop: 30888, Start Num: 20
Candidate Starts for Timothy_47:
(Start: 20 @31235 has 19 MA's), (24, 31202), (31, 31181), (58, 30968), (60, 30935),

Gene: TinyTimmy_47 Start: 31278, Stop: 30931, Start Num: 20
Candidate Starts for TinyTimmy_47:
(Start: 20 @31278 has 19 MA's), (24, 31245), (31, 31224), (58, 31011), (60, 30978),

Gene: TopsytheTRex_44 Start: 31322, Stop: 30915, Start Num: 13
Candidate Starts for TopsytheTRex_44:
(Start: 13 @31322 has 65 MA's), (47, 31139), (58, 30995), (60, 30962),

Gene: Tomathan_49 Start: 31906, Stop: 31496, Start Num: 13
Candidate Starts for Tomathan_49:
(2, 32233), (3, 32221), (Start: 13 @31906 has 65 MA's), (36, 31786), (42, 31762), (43, 31756), (56, 31663), (58, 31576), (60, 31543),

Gene: ToneTone_46 Start: 30864, Stop: 30436, Start Num: 13
Candidate Starts for ToneTone_46:
(Start: 7 @30891 has 3 MA's), (Start: 13 @30864 has 65 MA's), (25, 30768), (48, 30654), (53, 30612), (62, 30456),

Gene: Topanga_43 Start: 31489, Stop: 31151, Start Num: 33
Candidate Starts for Topanga_43:
(8, 31633), (15, 31582), (Start: 33 @31489 has 6 MA's), (53, 31339), (56, 31324), (57, 31246),

Gene: Travvers_49 Start: 31906, Stop: 31496, Start Num: 13
Candidate Starts for Travvers_49:
(2, 32233), (3, 32221), (Start: 13 @31906 has 65 MA's), (36, 31786), (42, 31762), (43, 31756), (56, 31663), (58, 31576), (60, 31543),

Gene: Trixie_45 Start: 32233, Stop: 31820, Start Num: 11
Candidate Starts for Trixie_45:
(Start: 11 @32233 has 2 MA's), (26, 32155), (27, 32137), (60, 31867),

Gene: Trooper_48 Start: 32526, Stop: 32104, Start Num: 9
Candidate Starts for Trooper_48:
(Start: 9 @32526 has 11 MA's), (Start: 13 @32517 has 65 MA's), (21, 32469), (26, 32439), (38, 32391), (40, 32382), (60, 32151),

Gene: Tucker_49 Start: 30751, Stop: 30323, Start Num: 13
Candidate Starts for Tucker_49:
(Start: 7 @30778 has 3 MA's), (Start: 13 @30751 has 65 MA's), (25, 30655), (48, 30541), (53, 30499), (62, 30343),

Gene: Turbido_48 Start: 32560, Stop: 32138, Start Num: 10
Candidate Starts for Turbido_48:
(Start: 10 @32560 has 34 MA's), (Start: 13 @32551 has 65 MA's), (24, 32458), (37, 32428), (60, 32185),

Gene: Twister_43 Start: 31400, Stop: 31062, Start Num: 33
Candidate Starts for Twister_43:

(8, 31544), (15, 31493), (Start: 33 @31400 has 6 MA's), (53, 31250), (56, 31235), (57, 31157),

Gene: Updawg_48 Start: 32422, Stop: 31988, Start Num: 13

Candidate Starts for Updawg_48:

(Start: 13 @32422 has 65 MA's), (26, 32323), (35, 32287), (60, 32035),

Gene: VohminGhazi_49 Start: 31138, Stop: 30710, Start Num: 13

Candidate Starts for VohminGhazi_49:

(Start: 7 @31165 has 3 MA's), (Start: 13 @31138 has 65 MA's), (25, 31042), (34, 31006), (50, 30916), (52, 30889), (53, 30886), (62, 30730),

Gene: WalterMcMickey_43 Start: 31400, Stop: 31062, Start Num: 33

Candidate Starts for WalterMcMickey_43:

(8, 31544), (15, 31493), (Start: 33 @31400 has 6 MA's), (53, 31250), (56, 31235), (57, 31157),

Gene: WeiHuaDA_49 Start: 33119, Stop: 32706, Start Num: 13

Candidate Starts for WeiHuaDA_49:

(Start: 13 @33119 has 65 MA's), (26, 33041), (36, 32999), (60, 32753),

Gene: Whabigail7_48 Start: 32545, Stop: 32123, Start Num: 10

Candidate Starts for Whabigail7_48:

(Start: 10 @32545 has 34 MA's), (Start: 13 @32536 has 65 MA's), (24, 32443), (26, 32437), (60, 32170),

Gene: WideWale_48 Start: 32422, Stop: 31988, Start Num: 13

Candidate Starts for WideWale_48:

(Start: 13 @32422 has 65 MA's), (26, 32323), (35, 32287), (60, 32035),

Gene: Wiks_48 Start: 30932, Stop: 30504, Start Num: 13

Candidate Starts for Wiks_48:

(Start: 7 @30959 has 3 MA's), (Start: 13 @30932 has 65 MA's), (25, 30836), (48, 30722), (53, 30680), (62, 30524),

Gene: WunderPhul_49 Start: 30930, Stop: 30502, Start Num: 13

Candidate Starts for WunderPhul_49:

(Start: 7 @30957 has 3 MA's), (Start: 13 @30930 has 65 MA's), (25, 30834), (48, 30720), (53, 30678), (62, 30522),

Gene: Yokurt_49 Start: 30959, Stop: 30504, Start Num: 7

Candidate Starts for Yokurt_49:

(Start: 7 @30959 has 3 MA's), (Start: 13 @30932 has 65 MA's), (25, 30836), (48, 30722), (53, 30680), (62, 30524),

Gene: Zaka_49 Start: 30932, Stop: 30504, Start Num: 13

Candidate Starts for Zaka_49:

(Start: 7 @30959 has 3 MA's), (Start: 13 @30932 has 65 MA's), (25, 30836), (48, 30722), (53, 30680), (62, 30524),

Gene: Zulu_49 Start: 30732, Stop: 30304, Start Num: 13

Candidate Starts for Zulu_49:

(Start: 7 @30759 has 3 MA's), (Start: 13 @30732 has 65 MA's), (25, 30636), (48, 30522), (53, 30480), (62, 30324),