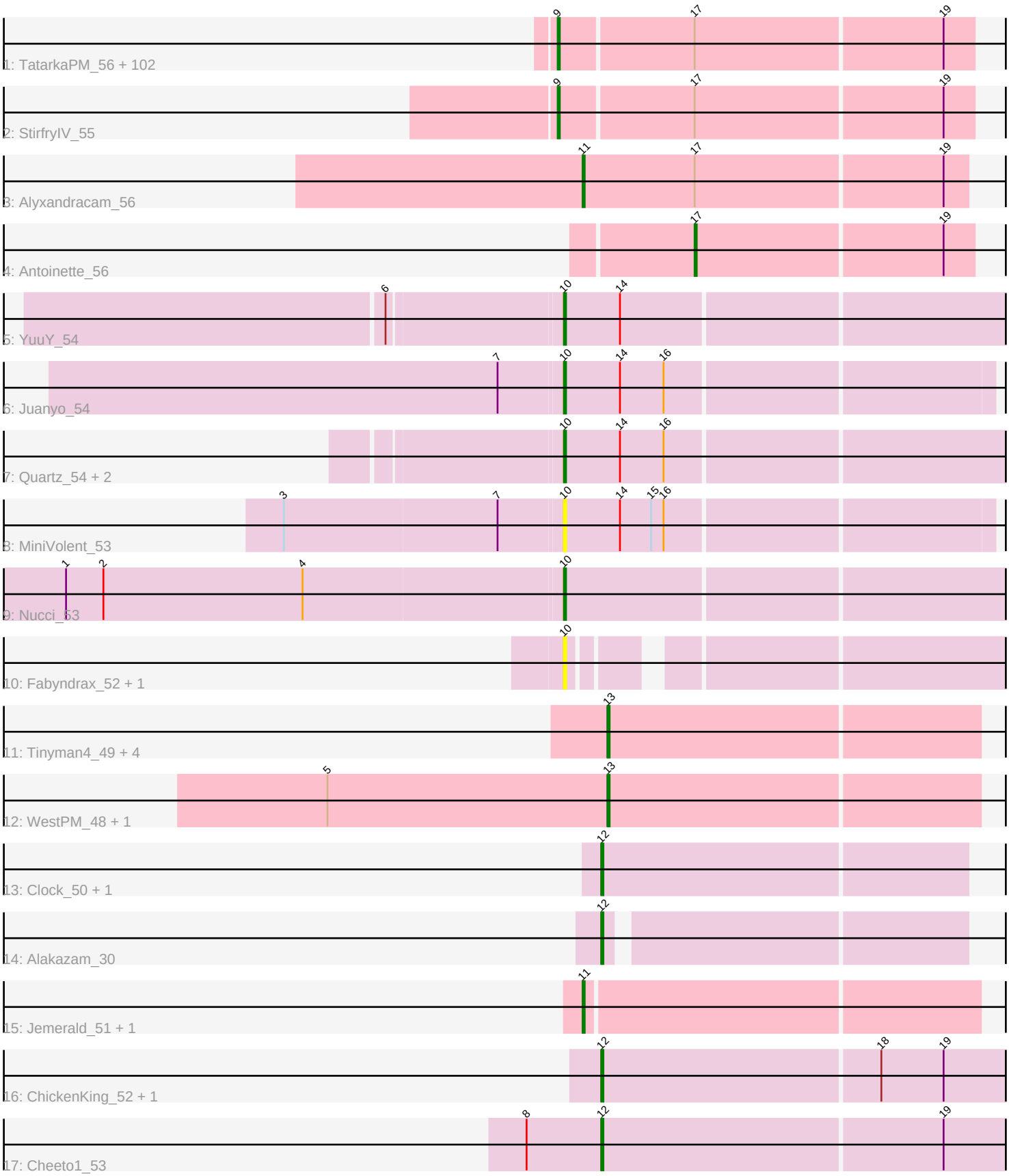
Pham 345500


1: TatarkaPM_56 + 102
2: StirfryIV_55
3: Alyxandracam_56
4: Antoinette_56
5: YuuY_54
6: Juanyo_54
7: Quartz_54 + 2
8: MiniVolent_53
9: Nucci_53
10: Fabyndrax_52 + 1
11: Tinyman4_49 + 4
12: WestPM_48 + 1
13: Clock_50 + 1
14: Alakazam_30
15: Jemerald_51 + 1
16: ChickenKing_52 + 1
17: Cheeto1_53

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 345500 Report

This analysis was run 11/14/26 on database version 672.

Pham number 345500 has 130 members, 7 are drafts.

Phages represented in each track:
• Track 1 : TatarkaPM_56, Renzie_56, Superfresh_56, Den3_56, Ioannes_56, SJay_56, Benjalauren_56, BonesMcCoy_56, PhredFlintston_56, AranulaLuti_55, Thompsone_56, TinSulphur_57, Erla_55, Inventa_56, Kouch_56, Dothraki_56, Stanktossa_55, Aubergine_55, Exploradora_55, Garey24_56, Bonino_55, Chamuel_55, KellyGreen_57, Thorongil_56, Asta_55, SonOfLevi_56, Nattles_55, ParleG_56, ManRay_55, Blage_56, Winzigespinne_55, TeddyBear_55, Gershwin_55, Peep_56, BeautPeep30_56, BigRedClifford_56, Vispistious_56, Duocatuli_55, JeriBeth_55, AxiPup_56, Velene_56, Oxtober96_57, Gelo_55, Symere_55, Baines_55, MillyPhilly_56, Convict_56, Espinosa_55, Greys_56, Dave_56, HungryHenry_55, Papafritta_55, Calix_55, Robinson_56, RosieMae_55, Rog141_55, WildNOut_56, HanSolo_55, Rapheph_56, Sedgewig_55, Ilzat_55, Knox_56, Phireproof_56, Klimt_56, KannH_55, Strathdee_56, Janus167_55, Clancy_55, Oats_55, GoingMerry_56, Martin_57, Lovelyunicorn_56, Pocket_55, Teagan_56, Byron23_57, Pherferi_56, Zada_57, Gargoyle_56, Christoph_55, Phiderman_56, MrWorldwide_56, AlexAdler_56, Nagem_56, HankSprout_56, ShaiHulud_56, Etta_55, Shee_56, PuppyEggo_56, JasperRussell_55, Raptor_56, Gubbabump_55, MaeLinda_56, CoraRita_55, StingRay_55, Riyhil_56, NickSell_56, Tenda_55, Jerbirus_57, Kurt1_56, Ludgate_56, Kale_55, Chako_55, Bandik_56
• Track 2 : StirfryIV_55
• Track 3 : Alyxandracam_56
• Track 4 : Antoinette_56
• Track 5 : YuuY_54
• Track 6 : Juanyo_54
• Track 7 : Quartz_54, Carostasia_53, Mandalorian_53
• Track 8 : MiniVolent_53
• Track 9 : Nucci_53
• Track 10 : Fabyndrax_52, Cidela_52
• Track 11 : Tinyman4_49, Kavo_49, Schimmels22_49, HerculesXL_50, Scissor2024_50
• Track 12 : WestPM_48, Penta_48
• Track 13 : Clock_50, Nebulous_49
• Track 14 : Alakazam_30
• Track 15 : Jemerald_51, Juicer_51
• Track 16 : ChickenKing_52, GaeCeo_54
• Track 17 : Cheeto1_53

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

The start number called the most often in the published annotations is 9, it was called in 102 of the 123 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• AlexAdler_56, AranulaLuti_55, Asta_55, Aubergine_55, AxiPup_56, Baines_55, Bandik_56, BeautPeep30_56, Benjalauren_56, BigRedClifford_56, Blage_56, BonesMcCoy_56, Bonino_55, Byron23_57, Calix_55, Chako_55, Chamuel_55, Christoph_55, Clancy_55, Convict_56, CoraRita_55, Dave_56, Den3_56, Dothraki_56, Duocatuli_55, Erla_55, Espinosa_55, Etta_55, Exploradora_55, Garey24_56, Gargoyle_56, Gelo_55, Gershwin_55, GoingMerry_56, Greys_56, Gubbabump_55, HanSolo_55, HankSprout_56, HungryHenry_55, Ilzat_55, Inventa_56, Ioannes_56, Janus167_55, JasperRussell_55, Jerbirus_57, JeriBeth_55, Kale_55, KannH_55, KellyGreen_57, Klimt_56, Knox_56, Kouch_56, Kurt1_56, Lovelyunicorn_56, Ludgate_56, MaeLinda_56, ManRay_55, Martin_57, MillyPhilly_56, MrWorldwide_56, Nagem_56, Nattles_55, NickSell_56, Oats_55, Oxtober96_57, Papafritta_55, ParleG_56, Peep_56, Pherferi_56, Phiderman_56, Phireproof_56, PhredFlintston_56, Pocket_55, PuppyEggo_56, Rapheph_56, Raptor_56, Renzie_56, Riyhil_56, Robinson_56, Rog141_55, RosieMae_55, SJay_56, Sedgewig_55, ShaiHulud_56, Shee_56, SonOfLevi_56, Stanktossa_55, StingRay_55, StirfryIV_55, Strathdee_56, Superfresh_56, Symere_55, TatarkaPM_56, Teagan_56, TeddyBear_55, Tenda_55, Thompsone_56, Thorongil_56, TinSulphur_57, Velene_56, Vispistious_56, WildNOut_56, Winzigespinne_55, Zada_57,

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

Genes that do not have the "Most Annotated" start:
• Alakazam_30, Alyxandracam_56, Antoinette_56, Carostasia_53, Cheeto1_53, ChickenKing_52, Cidela_52, Clock_50, Fabyndrax_52, GaeCeo_54, HerculesXL_50, Jemerald_51, Juanyo_54, Juicer_51, Kavo_49, Mandalorian_53, MiniVolent_53, Nebulous_49, Nucci_53, Penta_48, Quartz_54, Schimmels22_49, Scissor2024_50, Tinyman4_49, WestPM_48, YuuY_54,

Summary by start number:

Start 9:
• Found in 104 of 130 (80.0%) of genes in pham
• Manual Annotations of this start: 102 of 123
• Called 100.0% of time when present
• Phage (with cluster) where this start called: AlexAdler_56 (EA1), AranulaLuti_55 (EA1), Asta_55 (EA1), Aubergine_55 (EA1), AxiPup_56 (EA1), Baines_55 (EA1), Bandik_56 (EA1), BeautPeep30_56 (EA1), Benjalauren_56 (EA1), BigRedClifford_56 (EA1), Blage_56 (EA1), BonesMcCoy_56 (EA1), Bonino_55 (EA1), Byron23_57 (EA1), Calix_55 (EA1), Chako_55 (EA1), Chamuel_55 (EA1), Christoph_55 (EA1), Clancy_55 (EA1), Convict_56 (EA1), CoraRita_55 (EA1), Dave_56 (EA1), Den3_56 (EA1), Dothraki_56 (EA1), Duocatuli_55 (EA1), Erla_55 (EA1), Espinosa_55 (EA1), Etta_55 (EA1), Exploradora_55 (EA1), Garey24_56 (EA1), Gargoyle_56 (EA1), Gelo_55 (EA1), Gershwin_55 (EA1), GoingMerry_56 (EA1), Greys_56 (EA1), Gubbabump_55 (EA1), HanSolo_55 (EA1), HankSprout_56 (EA1), HungryHenry_55

(EA1), Ilzat_55 (EA1), Inventa_56 (EA1), Ioannes_56 (EA1), Janus167_55 (EA1), JasperRussell_55 (EA1), Jerbirus_57 (EA1), JeriBeth_55 (EA1), Kale_55 (EA1), KannH_55 (EA1), KellyGreen_57 (EA1), Klimt_56 (EA1), Knox_56 (EA1), Kouch_56 (EA1), Kurt1_56 (EA1), Lovelyunicorn_56 (EA1), Ludgate_56 (EA1), MaeLinda_56 (EA1), ManRay_55 (EA1), Martin_57 (EA1), MillyPhilly_56 (EA1), MrWorldwide_56 (EA1), Nagem_56 (EA1), Nattles_55 (EA1), NickSell_56 (EA1), Oats_55 (EA1), Oxtober96_57 (EA1), Papafritta_55 (EA1), ParleG_56 (EA1), Peep_56 (EA1), Pherferi_56 (EA1), Phiderman_56 (EA1), Phireproof_56 (EA1), PhredFlintston_56 (EA1), Pocket_55 (EA1), PuppyEggo_56 (EA1), Rapheph_56 (EA1), Raptor_56 (EA1), Renzie_56 (EA1), Riyhil_56 (EA1), Robinson_56 (EA1), Rog141_55 (EA1), RosieMae_55 (EA1), SJay_56 (EA1), Sedgewig_55 (EA1), ShaiHulud_56 (EA1), Shee_56 (EA1), SonOfLevi_56 (EA1), Stanktossa_55 (EA1), StingRay_55 (EA1), StirfryIV_55 (EA1), Strathdee_56 (EA1), Superfresh_56 (EA1), Symere_55 (EA1), TatarkaPM_56 (EA1), Teagan_56 (EA1), TeddyBear_55 (EA1), Tenda_55 (EA1), Thompsone_56 (EA1), Thorongil_56 (EA1), TinSulphur_57 (EA1), Velene_56 (EA1), Vispistious_56 (EA1), WildNOut_56 (EA1), Winzigespinne_55 (EA1), Zada_57 (EA1),

Start 10:
• Found in 9 of 130 (6.9%) of genes in pham
• Manual Annotations of this start: 6 of 123
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Carostasia_53 (EA10), Cidela_52 (EA10), Fabyndrax_52 (EA10), Juanyo_54 (EA10), Mandalorian_53 (EA10), MiniVolent_53 (EA10), Nucci_53 (EA10), Quartz_54 (EA10), YuuY_54 (EA10),

Start 11:
• Found in 3 of 130 (2.3%) of genes in pham
• Manual Annotations of this start: 3 of 123
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Alyxandracam_56 (EA1), Jemerald_51 (EA6), Juicer_51 (EA6),

Start 12:
• Found in 6 of 130 (4.6%) of genes in pham
• Manual Annotations of this start: 6 of 123
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Alakazam_30 (EA5), Cheeto1_53 (EA9), ChickenKing_52 (EA9), Clock_50 (EA5), GaeCeo_54 (EA9), Nebulous_49 (EA5),

Start 13:
• Found in 7 of 130 (5.4%) of genes in pham
• Manual Annotations of this start: 5 of 123
• Called 100.0% of time when present
• Phage (with cluster) where this start called: HerculesXL_50 (EA11), Kavo_49 (EA11), Penta_48 (EA11), Schimmels22_49 (EA11), Scissor2024_50 (EA11), Tinyman4_49 (EA11), WestPM_48 (EA11),

Start 17:
• Found in 106 of 130 (81.5%) of genes in pham
• Manual Annotations of this start: 1 of 123
• Called 0.9% of time when present
• Phage (with cluster) where this start called: Antoinette_56 (EA1),

Summary by clusters:

There are 6 clusters represented in this pham: EA11, EA10, EA9, EA1, EA5, EA6,

Info for manual annotations of cluster EA1:
•Start number 9 was manually annotated 102 times for cluster EA1.
•Start number 11 was manually annotated 1 time for cluster EA1.
•Start number 17 was manually annotated 1 time for cluster EA1.

Info for manual annotations of cluster EA10:
•Start number 10 was manually annotated 6 times for cluster EA10.

Info for manual annotations of cluster EA11:
•Start number 13 was manually annotated 5 times for cluster EA11.

Info for manual annotations of cluster EA5:
•Start number 12 was manually annotated 3 times for cluster EA5.

Info for manual annotations of cluster EA6:
•Start number 11 was manually annotated 2 times for cluster EA6.

Info for manual annotations of cluster EA9:
•Start number 12 was manually annotated 3 times for cluster EA9.

Gene Information:

Gene: Alakazam_30 Start: 21175, Stop: 21011, Start Num: 12
Candidate Starts for Alakazam_30:
(Start: 12 @21175 has 6 MA's),

Gene: AlexAdler_56 Start: 38319, Stop: 38125, Start Num: 9
Candidate Starts for AlexAdler_56:
(Start: 9 @38319 has 102 MA's), (Start: 17 @38256 has 1 MA's), (19, 38139),

Gene: Alyxandracam_56 Start: 38281, Stop: 38099, Start Num: 11
Candidate Starts for Alyxandracam_56:
(Start: 11 @38281 has 3 MA's), (Start: 17 @38227 has 1 MA's), (19, 38110),

Gene: Antoinette_56 Start: 38281, Stop: 38150, Start Num: 17
Candidate Starts for Antoinette_56:
(Start: 17 @38281 has 1 MA's), (19, 38164),

Gene: AranulaLuti_55 Start: 38037, Stop: 37843, Start Num: 9
Candidate Starts for AranulaLuti_55:
(Start: 9 @38037 has 102 MA's), (Start: 17 @37974 has 1 MA's), (19, 37857),

Gene: Asta_55 Start: 38041, Stop: 37847, Start Num: 9
Candidate Starts for Asta_55:
(Start: 9 @38041 has 102 MA's), (Start: 17 @37978 has 1 MA's), (19, 37861),

Gene: Aubergine_55 Start: 38041, Stop: 37847, Start Num: 9

Candidate Starts for Aubergine_55:
(Start: 9 @38041 has 102 MA's), (Start: 17 @37978 has 1 MA's), (19, 37861),

Gene: AxiPup_56 Start: 38256, Stop: 38062, Start Num: 9
Candidate Starts for AxiPup_56:
(Start: 9 @38256 has 102 MA's), (Start: 17 @38193 has 1 MA's), (19, 38076),

Gene: Baines_55 Start: 38041, Stop: 37847, Start Num: 9
Candidate Starts for Baines_55:
(Start: 9 @38041 has 102 MA's), (Start: 17 @37978 has 1 MA's), (19, 37861),

Gene: Bandik_56 Start: 38288, Stop: 38094, Start Num: 9
Candidate Starts for Bandik_56:
(Start: 9 @38288 has 102 MA's), (Start: 17 @38225 has 1 MA's), (19, 38108),

Gene: BeautPeep30_56 Start: 38294, Stop: 38100, Start Num: 9
Candidate Starts for BeautPeep30_56:
(Start: 9 @38294 has 102 MA's), (Start: 17 @38231 has 1 MA's), (19, 38114),

Gene: Benjalauren_56 Start: 38047, Stop: 37853, Start Num: 9
Candidate Starts for Benjalauren_56:
(Start: 9 @38047 has 102 MA's), (Start: 17 @37984 has 1 MA's), (19, 37867),

Gene: BigRedClifford_56 Start: 38283, Stop: 38089, Start Num: 9
Candidate Starts for BigRedClifford_56:
(Start: 9 @38283 has 102 MA's), (Start: 17 @38220 has 1 MA's), (19, 38103),

Gene: Blage_56 Start: 38283, Stop: 38089, Start Num: 9
Candidate Starts for Blage_56:
(Start: 9 @38283 has 102 MA's), (Start: 17 @38220 has 1 MA's), (19, 38103),

Gene: BonesMcCoy_56 Start: 38283, Stop: 38089, Start Num: 9
Candidate Starts for BonesMcCoy_56:
(Start: 9 @38283 has 102 MA's), (Start: 17 @38220 has 1 MA's), (19, 38103),

Gene: Bonino_55 Start: 38020, Stop: 37826, Start Num: 9
Candidate Starts for Bonino_55:
(Start: 9 @38020 has 102 MA's), (Start: 17 @37957 has 1 MA's), (19, 37840),

Gene: Byron23_57 Start: 38291, Stop: 38097, Start Num: 9
Candidate Starts for Byron23_57:
(Start: 9 @38291 has 102 MA's), (Start: 17 @38228 has 1 MA's), (19, 38111),

Gene: Calix_55 Start: 38027, Stop: 37833, Start Num: 9
Candidate Starts for Calix_55:
(Start: 9 @38027 has 102 MA's), (Start: 17 @37964 has 1 MA's), (19, 37847),

Gene: Carostasia_53 Start: 36317, Stop: 36105, Start Num: 10
Candidate Starts for Carostasia_53:
(Start: 10 @36317 has 6 MA's), (14, 36290), (16, 36269),

Gene: Chako_55 Start: 38037, Stop: 37843, Start Num: 9
Candidate Starts for Chako_55:

(Start: 9 @38037 has 102 MA's), (Start: 17 @37974 has 1 MA's), (19, 37857),

Gene: Chamuel_55 Start: 38053, Stop: 37859, Start Num: 9
Candidate Starts for Chamuel_55:
(Start: 9 @38053 has 102 MA's), (Start: 17 @37990 has 1 MA's), (19, 37873),

Gene: Cheeto1_53 Start: 36803, Stop: 36609, Start Num: 12
Candidate Starts for Cheeto1_53:
(8, 36839), (Start: 12 @36803 has 6 MA's), (19, 36641),

Gene: ChickenKing_52 Start: 37132, Stop: 36938, Start Num: 12
Candidate Starts for ChickenKing_52:
(Start: 12 @37132 has 6 MA's), (18, 37000), (19, 36970),

Gene: Christoph_55 Start: 38040, Stop: 37846, Start Num: 9
Candidate Starts for Christoph_55:
(Start: 9 @38040 has 102 MA's), (Start: 17 @37977 has 1 MA's), (19, 37860),

Gene: Cidela_52 Start: 37230, Stop: 37036, Start Num: 10
Candidate Starts for Cidela_52:
(Start: 10 @37230 has 6 MA's),

Gene: Clancy_55 Start: 38040, Stop: 37846, Start Num: 9
Candidate Starts for Clancy_55:
(Start: 9 @38040 has 102 MA's), (Start: 17 @37977 has 1 MA's), (19, 37860),

Gene: Clock_50 Start: 37239, Stop: 37066, Start Num: 12
Candidate Starts for Clock_50:
(Start: 12 @37239 has 6 MA's),

Gene: Convict_56 Start: 38283, Stop: 38089, Start Num: 9
Candidate Starts for Convict_56:
(Start: 9 @38283 has 102 MA's), (Start: 17 @38220 has 1 MA's), (19, 38103),

Gene: CoraRita_55 Start: 38010, Stop: 37816, Start Num: 9
Candidate Starts for CoraRita_55:
(Start: 9 @38010 has 102 MA's), (Start: 17 @37947 has 1 MA's), (19, 37830),

Gene: Dave_56 Start: 38344, Stop: 38150, Start Num: 9
Candidate Starts for Dave_56:
(Start: 9 @38344 has 102 MA's), (Start: 17 @38281 has 1 MA's), (19, 38164),

Gene: Den3_56 Start: 38288, Stop: 38094, Start Num: 9
Candidate Starts for Den3_56:
(Start: 9 @38288 has 102 MA's), (Start: 17 @38225 has 1 MA's), (19, 38108),

Gene: Dothraki_56 Start: 38291, Stop: 38097, Start Num: 9
Candidate Starts for Dothraki_56:
(Start: 9 @38291 has 102 MA's), (Start: 17 @38228 has 1 MA's), (19, 38111),

Gene: Duocatuli_55 Start: 38037, Stop: 37843, Start Num: 9
Candidate Starts for Duocatuli_55:
(Start: 9 @38037 has 102 MA's), (Start: 17 @37974 has 1 MA's), (19, 37857),

Gene: Erla_55 Start: 38024, Stop: 37830, Start Num: 9
Candidate Starts for Erla_55:
(Start: 9 @38024 has 102 MA's), (Start: 17 @37961 has 1 MA's), (19, 37844),

Gene: Espinosa_55 Start: 38039, Stop: 37845, Start Num: 9
Candidate Starts for Espinosa_55:
(Start: 9 @38039 has 102 MA's), (Start: 17 @37976 has 1 MA's), (19, 37859),

Gene: Etta_55 Start: 38028, Stop: 37834, Start Num: 9
Candidate Starts for Etta_55:
(Start: 9 @38028 has 102 MA's), (Start: 17 @37965 has 1 MA's), (19, 37848),

Gene: Exploradora_55 Start: 37989, Stop: 37795, Start Num: 9
Candidate Starts for Exploradora_55:
(Start: 9 @37989 has 102 MA's), (Start: 17 @37926 has 1 MA's), (19, 37809),

Gene: Fabyndrax_52 Start: 37242, Stop: 37048, Start Num: 10
Candidate Starts for Fabyndrax_52:
(Start: 10 @37242 has 6 MA's),

Gene: GaeCeo_54 Start: 37365, Stop: 37171, Start Num: 12
Candidate Starts for GaeCeo_54:
(Start: 12 @37365 has 6 MA's), (18, 37233), (19, 37203),

Gene: Garey24_56 Start: 38007, Stop: 37813, Start Num: 9
Candidate Starts for Garey24_56:
(Start: 9 @38007 has 102 MA's), (Start: 17 @37944 has 1 MA's), (19, 37827),

Gene: Gargoyle_56 Start: 38288, Stop: 38094, Start Num: 9
Candidate Starts for Gargoyle_56:
(Start: 9 @38288 has 102 MA's), (Start: 17 @38225 has 1 MA's), (19, 38108),

Gene: Gelo_55 Start: 38034, Stop: 37840, Start Num: 9
Candidate Starts for Gelo_55:
(Start: 9 @38034 has 102 MA's), (Start: 17 @37971 has 1 MA's), (19, 37854),

Gene: Gershwin_55 Start: 38041, Stop: 37847, Start Num: 9
Candidate Starts for Gershwin_55:
(Start: 9 @38041 has 102 MA's), (Start: 17 @37978 has 1 MA's), (19, 37861),

Gene: GoingMerry_56 Start: 38266, Stop: 38072, Start Num: 9
Candidate Starts for GoingMerry_56:
(Start: 9 @38266 has 102 MA's), (Start: 17 @38203 has 1 MA's), (19, 38086),

Gene: Greys_56 Start: 38284, Stop: 38090, Start Num: 9
Candidate Starts for Greys_56:
(Start: 9 @38284 has 102 MA's), (Start: 17 @38221 has 1 MA's), (19, 38104),

Gene: Gubbabump_55 Start: 37979, Stop: 37785, Start Num: 9
Candidate Starts for Gubbabump_55:
(Start: 9 @37979 has 102 MA's), (Start: 17 @37916 has 1 MA's), (19, 37799),

Gene: HanSolo_55 Start: 37989, Stop: 37795, Start Num: 9
Candidate Starts for HanSolo_55:
(Start: 9 @37989 has 102 MA's), (Start: 17 @37926 has 1 MA's), (19, 37809),

Gene: HankSprout_56 Start: 37908, Stop: 37714, Start Num: 9
Candidate Starts for HankSprout_56:
(Start: 9 @37908 has 102 MA's), (Start: 17 @37845 has 1 MA's), (19, 37728),

Gene: HerculesXL_50 Start: 34968, Stop: 34792, Start Num: 13
Candidate Starts for HerculesXL_50:
(Start: 13 @34968 has 5 MA's),

Gene: HungryHenry_55 Start: 38001, Stop: 37807, Start Num: 9
Candidate Starts for HungryHenry_55:
(Start: 9 @38001 has 102 MA's), (Start: 17 @37938 has 1 MA's), (19, 37821),

Gene: Ilzat_55 Start: 38011, Stop: 37817, Start Num: 9
Candidate Starts for Ilzat_55:
(Start: 9 @38011 has 102 MA's), (Start: 17 @37948 has 1 MA's), (19, 37831),

Gene: Inventa_56 Start: 38288, Stop: 38094, Start Num: 9
Candidate Starts for Inventa_56:
(Start: 9 @38288 has 102 MA's), (Start: 17 @38225 has 1 MA's), (19, 38108),

Gene: Ioannes_56 Start: 38366, Stop: 38172, Start Num: 9
Candidate Starts for Ioannes_56:
(Start: 9 @38366 has 102 MA's), (Start: 17 @38303 has 1 MA's), (19, 38186),

Gene: Janus167_55 Start: 38016, Stop: 37822, Start Num: 9
Candidate Starts for Janus167_55:
(Start: 9 @38016 has 102 MA's), (Start: 17 @37953 has 1 MA's), (19, 37836),

Gene: JasperRussell_55 Start: 38037, Stop: 37843, Start Num: 9
Candidate Starts for JasperRussell_55:
(Start: 9 @38037 has 102 MA's), (Start: 17 @37974 has 1 MA's), (19, 37857),

Gene: Jemerald_51 Start: 36354, Stop: 36169, Start Num: 11
Candidate Starts for Jemerald_51:
(Start: 11 @36354 has 3 MA's),

Gene: Jerbirus_57 Start: 38031, Stop: 37837, Start Num: 9
Candidate Starts for Jerbirus_57:
(Start: 9 @38031 has 102 MA's), (Start: 17 @37968 has 1 MA's), (19, 37851),

Gene: JeriBeth_55 Start: 37919, Stop: 37725, Start Num: 9
Candidate Starts for JeriBeth_55:
(Start: 9 @37919 has 102 MA's), (Start: 17 @37856 has 1 MA's), (19, 37739),

Gene: Juanyo_54 Start: 36796, Stop: 36596, Start Num: 10
Candidate Starts for Juanyo_54:
(7, 36826), (Start: 10 @36796 has 6 MA's), (14, 36769), (16, 36748),

Gene: Juicer_51 Start: 36354, Stop: 36169, Start Num: 11

Candidate Starts for Juicer_51:
(Start: 11 @36354 has 3 MA's),

Gene: Kale_55 Start: 38043, Stop: 37849, Start Num: 9
Candidate Starts for Kale_55:
(Start: 9 @38043 has 102 MA's), (Start: 17 @37980 has 1 MA's), (19, 37863),

Gene: KannH_55 Start: 38037, Stop: 37843, Start Num: 9
Candidate Starts for KannH_55:
(Start: 9 @38037 has 102 MA's), (Start: 17 @37974 has 1 MA's), (19, 37857),

Gene: Kavo_49 Start: 35015, Stop: 34839, Start Num: 13
Candidate Starts for Kavo_49:
(Start: 13 @35015 has 5 MA's),

Gene: KellyGreen_57 Start: 38025, Stop: 37831, Start Num: 9
Candidate Starts for KellyGreen_57:
(Start: 9 @38025 has 102 MA's), (Start: 17 @37962 has 1 MA's), (19, 37845),

Gene: Klimt_56 Start: 38059, Stop: 37865, Start Num: 9
Candidate Starts for Klimt_56:
(Start: 9 @38059 has 102 MA's), (Start: 17 @37996 has 1 MA's), (19, 37879),

Gene: Knox_56 Start: 38283, Stop: 38089, Start Num: 9
Candidate Starts for Knox_56:
(Start: 9 @38283 has 102 MA's), (Start: 17 @38220 has 1 MA's), (19, 38103),

Gene: Kouch_56 Start: 37989, Stop: 37795, Start Num: 9
Candidate Starts for Kouch_56:
(Start: 9 @37989 has 102 MA's), (Start: 17 @37926 has 1 MA's), (19, 37809),

Gene: Kurt1_56 Start: 38288, Stop: 38094, Start Num: 9
Candidate Starts for Kurt1_56:
(Start: 9 @38288 has 102 MA's), (Start: 17 @38225 has 1 MA's), (19, 38108),

Gene: Lovelyunicorn_56 Start: 38284, Stop: 38090, Start Num: 9
Candidate Starts for Lovelyunicorn_56:
(Start: 9 @38284 has 102 MA's), (Start: 17 @38221 has 1 MA's), (19, 38104),

Gene: Ludgate_56 Start: 38285, Stop: 38091, Start Num: 9
Candidate Starts for Ludgate_56:
(Start: 9 @38285 has 102 MA's), (Start: 17 @38222 has 1 MA's), (19, 38105),

Gene: MaeLinda_56 Start: 38295, Stop: 38098, Start Num: 9
Candidate Starts for MaeLinda_56:
(Start: 9 @38295 has 102 MA's), (Start: 17 @38232 has 1 MA's), (19, 38112),

Gene: ManRay_55 Start: 38041, Stop: 37847, Start Num: 9
Candidate Starts for ManRay_55:
(Start: 9 @38041 has 102 MA's), (Start: 17 @37978 has 1 MA's), (19, 37861),

Gene: Mandalorian_53 Start: 36328, Stop: 36116, Start Num: 10
Candidate Starts for Mandalorian_53:

(Start: 10 @36328 has 6 MA's), (14, 36301), (16, 36280),

Gene: Martin_57 Start: 38297, Stop: 38103, Start Num: 9
Candidate Starts for Martin_57:
(Start: 9 @38297 has 102 MA's), (Start: 17 @38234 has 1 MA's), (19, 38117),

Gene: MillyPhilly_56 Start: 38285, Stop: 38091, Start Num: 9
Candidate Starts for MillyPhilly_56:
(Start: 9 @38285 has 102 MA's), (Start: 17 @38222 has 1 MA's), (19, 38105),

Gene: MiniVolent_53 Start: 36750, Stop: 36550, Start Num: 10
Candidate Starts for MiniVolent_53:
(3, 36882), (7, 36780), (Start: 10 @36750 has 6 MA's), (14, 36723), (15, 36708), (16, 36702),

Gene: MrWorldwide_56 Start: 38295, Stop: 38101, Start Num: 9
Candidate Starts for MrWorldwide_56:
(Start: 9 @38295 has 102 MA's), (Start: 17 @38232 has 1 MA's), (19, 38115),

Gene: Nagem_56 Start: 38331, Stop: 38137, Start Num: 9
Candidate Starts for Nagem_56:
(Start: 9 @38331 has 102 MA's), (Start: 17 @38268 has 1 MA's), (19, 38151),

Gene: Nattles_55 Start: 38028, Stop: 37834, Start Num: 9
Candidate Starts for Nattles_55:
(Start: 9 @38028 has 102 MA's), (Start: 17 @37965 has 1 MA's), (19, 37848),

Gene: Nebulous_49 Start: 37420, Stop: 37247, Start Num: 12
Candidate Starts for Nebulous_49:
(Start: 12 @37420 has 6 MA's),

Gene: NickSell_56 Start: 38298, Stop: 38104, Start Num: 9
Candidate Starts for NickSell_56:
(Start: 9 @38298 has 102 MA's), (Start: 17 @38235 has 1 MA's), (19, 38118),

Gene: Nucci_53 Start: 36289, Stop: 36077, Start Num: 10
Candidate Starts for Nucci_53:
(1, 36526), (2, 36508), (4, 36412), (Start: 10 @36289 has 6 MA's),

Gene: Oats_55 Start: 38041, Stop: 37847, Start Num: 9
Candidate Starts for Oats_55:
(Start: 9 @38041 has 102 MA's), (Start: 17 @37978 has 1 MA's), (19, 37861),

Gene: Oxtober96_57 Start: 38284, Stop: 38090, Start Num: 9
Candidate Starts for Oxtober96_57:
(Start: 9 @38284 has 102 MA's), (Start: 17 @38221 has 1 MA's), (19, 38104),

Gene: Papafritta_55 Start: 38046, Stop: 37852, Start Num: 9
Candidate Starts for Papafritta_55:
(Start: 9 @38046 has 102 MA's), (Start: 17 @37983 has 1 MA's), (19, 37866),

Gene: ParleG_56 Start: 38295, Stop: 38101, Start Num: 9
Candidate Starts for ParleG_56:
(Start: 9 @38295 has 102 MA's), (Start: 17 @38232 has 1 MA's), (19, 38115),

Gene: Peep_56 Start: 38341, Stop: 38147, Start Num: 9
Candidate Starts for Peep_56:
(Start: 9 @38341 has 102 MA's), (Start: 17 @38278 has 1 MA's), (19, 38161),

Gene: Penta_48 Start: 34850, Stop: 34674, Start Num: 13
Candidate Starts for Penta_48:
(5, 34985), (Start: 13 @34850 has 5 MA's),

Gene: Pherferi_56 Start: 38288, Stop: 38094, Start Num: 9
Candidate Starts for Pherferi_56:
(Start: 9 @38288 has 102 MA's), (Start: 17 @38225 has 1 MA's), (19, 38108),

Gene: Phiderman_56 Start: 38285, Stop: 38091, Start Num: 9
Candidate Starts for Phiderman_56:
(Start: 9 @38285 has 102 MA's), (Start: 17 @38222 has 1 MA's), (19, 38105),

Gene: Phireproof_56 Start: 38294, Stop: 38100, Start Num: 9
Candidate Starts for Phireproof_56:
(Start: 9 @38294 has 102 MA's), (Start: 17 @38231 has 1 MA's), (19, 38114),

Gene: PhredFlintston_56 Start: 38288, Stop: 38094, Start Num: 9
Candidate Starts for PhredFlintston_56:
(Start: 9 @38288 has 102 MA's), (Start: 17 @38225 has 1 MA's), (19, 38108),

Gene: Pocket_55 Start: 38068, Stop: 37874, Start Num: 9
Candidate Starts for Pocket_55:
(Start: 9 @38068 has 102 MA's), (Start: 17 @38005 has 1 MA's), (19, 37888),

Gene: PuppyEggo_56 Start: 38289, Stop: 38095, Start Num: 9
Candidate Starts for PuppyEggo_56:
(Start: 9 @38289 has 102 MA's), (Start: 17 @38226 has 1 MA's), (19, 38109),

Gene: Quartz_54 Start: 36441, Stop: 36229, Start Num: 10
Candidate Starts for Quartz_54:
(Start: 10 @36441 has 6 MA's), (14, 36414), (16, 36393),

Gene: Rapheph_56 Start: 38288, Stop: 38094, Start Num: 9
Candidate Starts for Rapheph_56:
(Start: 9 @38288 has 102 MA's), (Start: 17 @38225 has 1 MA's), (19, 38108),

Gene: Raptor_56 Start: 38286, Stop: 38092, Start Num: 9
Candidate Starts for Raptor_56:
(Start: 9 @38286 has 102 MA's), (Start: 17 @38223 has 1 MA's), (19, 38106),

Gene: Renzie_56 Start: 38344, Stop: 38150, Start Num: 9
Candidate Starts for Renzie_56:
(Start: 9 @38344 has 102 MA's), (Start: 17 @38281 has 1 MA's), (19, 38164),

Gene: Riyhil_56 Start: 38298, Stop: 38104, Start Num: 9
Candidate Starts for Riyhil_56:
(Start: 9 @38298 has 102 MA's), (Start: 17 @38235 has 1 MA's), (19, 38118),

Gene: Robinson_56 Start: 38360, Stop: 38166, Start Num: 9
Candidate Starts for Robinson_56:
(Start: 9 @38360 has 102 MA's), (Start: 17 @38297 has 1 MA's), (19, 38180),

Gene: Rog141_55 Start: 38031, Stop: 37837, Start Num: 9
Candidate Starts for Rog141_55:
(Start: 9 @38031 has 102 MA's), (Start: 17 @37968 has 1 MA's), (19, 37851),

Gene: RosieMae_55 Start: 38092, Stop: 37898, Start Num: 9
Candidate Starts for RosieMae_55:
(Start: 9 @38092 has 102 MA's), (Start: 17 @38029 has 1 MA's), (19, 37912),

Gene: SJay_56 Start: 38332, Stop: 38138, Start Num: 9
Candidate Starts for SJay_56:
(Start: 9 @38332 has 102 MA's), (Start: 17 @38269 has 1 MA's), (19, 38152),

Gene: Schimmels22_49 Start: 35268, Stop: 35092, Start Num: 13
Candidate Starts for Schimmels22_49:
(Start: 13 @35268 has 5 MA's),

Gene: Scissor2024_50 Start: 34914, Stop: 34738, Start Num: 13
Candidate Starts for Scissor2024_50:
(Start: 13 @34914 has 5 MA's),

Gene: Sedgewig_55 Start: 37993, Stop: 37799, Start Num: 9
Candidate Starts for Sedgewig_55:
(Start: 9 @37993 has 102 MA's), (Start: 17 @37930 has 1 MA's), (19, 37813),

Gene: ShaiHulud_56 Start: 38298, Stop: 38104, Start Num: 9
Candidate Starts for ShaiHulud_56:
(Start: 9 @38298 has 102 MA's), (Start: 17 @38235 has 1 MA's), (19, 38118),

Gene: Shee_56 Start: 38285, Stop: 38091, Start Num: 9
Candidate Starts for Shee_56:
(Start: 9 @38285 has 102 MA's), (Start: 17 @38222 has 1 MA's), (19, 38105),

Gene: SonOfLevi_56 Start: 38059, Stop: 37865, Start Num: 9
Candidate Starts for SonOfLevi_56:
(Start: 9 @38059 has 102 MA's), (Start: 17 @37996 has 1 MA's), (19, 37879),

Gene: Stanktossa_55 Start: 38288, Stop: 38094, Start Num: 9
Candidate Starts for Stanktossa_55:
(Start: 9 @38288 has 102 MA's), (Start: 17 @38225 has 1 MA's), (19, 38108),

Gene: StingRay_55 Start: 38083, Stop: 37889, Start Num: 9
Candidate Starts for StingRay_55:
(Start: 9 @38083 has 102 MA's), (Start: 17 @38020 has 1 MA's), (19, 37903),

Gene: StirfryIV_55 Start: 38004, Stop: 37810, Start Num: 9
Candidate Starts for StirfryIV_55:
(Start: 9 @38004 has 102 MA's), (Start: 17 @37941 has 1 MA's), (19, 37824),

Gene: Strathdee_56 Start: 38288, Stop: 38094, Start Num: 9

Candidate Starts for Strathdee_56:
(Start: 9 @38288 has 102 MA's), (Start: 17 @38225 has 1 MA's), (19, 38108),

Gene: Superfresh_56 Start: 38344, Stop: 38150, Start Num: 9
Candidate Starts for Superfresh_56:
(Start: 9 @38344 has 102 MA's), (Start: 17 @38281 has 1 MA's), (19, 38164),

Gene: Symere_55 Start: 38003, Stop: 37809, Start Num: 9
Candidate Starts for Symere_55:
(Start: 9 @38003 has 102 MA's), (Start: 17 @37940 has 1 MA's), (19, 37823),

Gene: TatarkaPM_56 Start: 38298, Stop: 38104, Start Num: 9
Candidate Starts for TatarkaPM_56:
(Start: 9 @38298 has 102 MA's), (Start: 17 @38235 has 1 MA's), (19, 38118),

Gene: Teagan_56 Start: 38279, Stop: 38085, Start Num: 9
Candidate Starts for Teagan_56:
(Start: 9 @38279 has 102 MA's), (Start: 17 @38216 has 1 MA's), (19, 38099),

Gene: TeddyBear_55 Start: 38041, Stop: 37847, Start Num: 9
Candidate Starts for TeddyBear_55:
(Start: 9 @38041 has 102 MA's), (Start: 17 @37978 has 1 MA's), (19, 37861),

Gene: Tenda_55 Start: 38039, Stop: 37845, Start Num: 9
Candidate Starts for Tenda_55:
(Start: 9 @38039 has 102 MA's), (Start: 17 @37976 has 1 MA's), (19, 37859),

Gene: Thompsone_56 Start: 38286, Stop: 38092, Start Num: 9
Candidate Starts for Thompsone_56:
(Start: 9 @38286 has 102 MA's), (Start: 17 @38223 has 1 MA's), (19, 38106),

Gene: Thorongil_56 Start: 37803, Stop: 37609, Start Num: 9
Candidate Starts for Thorongil_56:
(Start: 9 @37803 has 102 MA's), (Start: 17 @37740 has 1 MA's), (19, 37623),

Gene: TinSulphur_57 Start: 38294, Stop: 38100, Start Num: 9
Candidate Starts for TinSulphur_57:
(Start: 9 @38294 has 102 MA's), (Start: 17 @38231 has 1 MA's), (19, 38114),

Gene: Tinyman4_49 Start: 34964, Stop: 34788, Start Num: 13
Candidate Starts for Tinyman4_49:
(Start: 13 @34964 has 5 MA's),

Gene: Velene_56 Start: 38284, Stop: 38090, Start Num: 9
Candidate Starts for Velene_56:
(Start: 9 @38284 has 102 MA's), (Start: 17 @38221 has 1 MA's), (19, 38104),

Gene: Vispistious_56 Start: 38289, Stop: 38095, Start Num: 9
Candidate Starts for Vispistious_56:
(Start: 9 @38289 has 102 MA's), (Start: 17 @38226 has 1 MA's), (19, 38109),

Gene: WestPM_48 Start: 35040, Stop: 34864, Start Num: 13
Candidate Starts for WestPM_48:

(5, 35175), (Start: 13 @35040 has 5 MA's),

Gene: WildNOut_56 Start: 38282, Stop: 38088, Start Num: 9
Candidate Starts for WildNOut_56:
(Start: 9 @38282 has 102 MA's), (Start: 17 @38219 has 1 MA's), (19, 38102),

Gene: Winzigespinne_55 Start: 38027, Stop: 37833, Start Num: 9
Candidate Starts for Winzigespinne_55:
(Start: 9 @38027 has 102 MA's), (Start: 17 @37964 has 1 MA's), (19, 37847),

Gene: YuuY_54 Start: 36860, Stop: 36654, Start Num: 10
Candidate Starts for YuuY_54:
(6, 36941), (Start: 10 @36860 has 6 MA's), (14, 36833),

Gene: Zada_57 Start: 38301, Stop: 38107, Start Num: 9
Candidate Starts for Zada_57:
(Start: 9 @38301 has 102 MA's), (Start: 17 @38238 has 1 MA's), (19, 38121),