Pham 283536

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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 283536 Report

This analysis was run 02/23/26 on database version 636.

Pham number 283536 has 170 members, 21 are drafts.

Phages represented in each track:
• Track 1 : Homines_52
• Track 2 : LilBib_61
• Track 3 : Fushigi_74
• Track 4 : ScoobyDoobyDoo_3
• Track 5 : Holt_43, DoctorDiddles_42
• Track 6 : ChotaBhai_42
• Track 7 : Amao_42
• Track 8 : Pat3_41
• Track 9 : BigBubba_42
• Track 10 : SirDuracell_41
• Track 11 : Mindy_43
• Track 12 : Blarby_62
• Track 13 : Deb65_47, Poenanya_50, Sandalphon_53, RockyHorror_51, EmiMonkey_48, Vivum_55, OldBen_49, DaWorst_52, Spoonbill_49, Scottish_50, Blexus_49, Leperchaun_44, Daenerys_46, JoeyJr_47, Phasih_48, BodEinwohner17_52, PHappiness_47, BlueCrab_48, Stap_50, Radiance_51, Boomer_53, Zerg_50, Geralt_47, RitaG_47, Oksu_55, Nimbo_46, Polka14_48, IbOuu_53, Spikelee_57, Doug_53, PhlipPhlop_50, Pacc40_46, Doomphist_50, PMC_45, Rockne_49, Empress_50, KingMidas_51
• Track 14 : OlympiaSaint_51
• Track 15 : Jinglebell_56, Ochi17_54, Llama_56, Modragons_55, AlpineSix_56, Seabastian_56, OfUltron_56
• Track 16 : Mozy_89, MadMen_88, LunaBlu_85, Velveteen_76, KristaRAM_80, Brookers_77, Coco12_79, Sarma624_81, Cerasum_76, BigPhil_75, Soul22_83, Enzomatic_92, NewHope4_85, Ogopogo_88, Kingsley_86, Bipolar_85, LittleE_76, Polo2Bam_91
• Track 17 : Gandalph_52
• Track 18 : Florinda_63, Topiatin_56, Quico_60
• Track 19 : Ovechkin_75
• Track 20 : Batiatus_82, Ms6_83, MilanaBonita_78, Kumao_60, Akhila_79
• Track 21 : EleanorGeorge_84
• Track 22 : Pollywog_51
• Track 23 : Job42_51
• Track 24 : Beanstalk_80
• Track 25 : Cheesepuff_88
• Track 26 : Phanphagia_48, Shauna1_48, Bipolar_50, SuperGrey_53, JalFarm20_61, Donkeykong_54

- Track 27 : Cheesepuff_94
- Track 28 : IrishSherpFalk_82, WillSterrel_81, Spartacus_88
- Track 29 : Brushbloom_74
- Track 30 : DeadP_56, Renaud18_56, Taj_54, Wee_53
- Track 31 : Topiatin_86
- Track 32 : Batiatus_71
- Track 33 : ShroomBoi_53
- Track 34 : Filuzino_81
- Track 35 : OwlsT2W_50
- Track 36 : Tweety_50
- Track 37 : KristaRAM_52
- Track 38 : Tchotchke_77
- Track 39 : Eish_52
- Track 40 : Ramsey_52
- Track 41 : Donkeykong_87
- Track 42 : Estave1_51
- Track 43 : Plumbus_53
- Track 44 : Che9d_57, Demsculpinboyz_60
- Track 45 : Squirty_54
- Track 46 : ThetaBob_55
- Track 47 : Cornie_84
- Track 48 : Cornie_44
- Track 49 : Zelink_72, Superphikiman_72, Bagrid_73, BronnyJames_69, Schatzie_69, Daikon_43, Kalah2_69, Redno2_71, DmpstrDiver_74, Phoebus_77, Squint_75, Beem_74, JuicyJay_73, Cali_18, Sprinklers_17, NihilNomen_75, Traaww1_39, Flypotenuse_37, Ejimix_74, Che8_87, Glexan_40, Jant_83, BadAgartude_18, Dallas_73, HokkenD_67, Odette_73, ThreeRngTarjay_72, Shaboozey_68, Mwanjiwa_85, Porcelain_74, Balomoji_41, EricMillard_73, Hughesyang_73, MiaZeal_75, Lucky2013_72, Halley_76, Ariel_74, Gator_40, Harella_42, Rearden_67
- Track 50 : Yeet_70, Marker_88
- Track 51 : Courthouse_71
- Track 52 : Nebkiss_50, Gaia_47

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

The start number called the most often in the published annotations is 76, it was called in 60 of the 149 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
- Akhila_79, Ariel_74, BadAgartude_18, Bagrid_73, Balomoji_41, Batiatus_82, Beem_74, BigPhil_75, Bipolar_85, BronnyJames_69, Brookers_77, Cali_18, Cerasum_76, Che8_87, Coco12_79, Courthouse_71, Daikon_43, Dallas_73, DmpstrDiver_74, Donkeykong_87, Ejimix_74, Enzomatic_92, EricMillard_73, Flypotenuse_37, Gator_40, Glexan_40, Halley_76, Harella_42, HokkenD_67, Hughesyang_73, IrishSherpFalk_82, Jant_83, JuicyJay_73, Kalah2_69, Kingsley_86, KristaRAM_80, Kumao_60, LilBib_61, LittleE_76, Lucky2013_72, LunaBlu_85, MadMen_88, Marker_88, MiaZeal_75, MilanaBonita_78, Mozy_89, Ms6_83, Mwanjiwa_85, NewHope4_85, NihilNomen_75, Odette_73, Ogopogo_88, Phoebus_77, Polo2Bam_91, Porcelain_74, Rearden_67, Redno2_71, Sarma624_81,

Schatzie_69, Shaboozey_68, Soul22_83, Spartacus_88, Sprinklers_17, Squint_75, Superphikiman_72, Tchotchke_77, ThreeRngTarjay_72, Traaww1_39, Velveteen_76, WillSterrel_81, Yeet_70, Zelink_72,

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

Genes that do not have the "Most Annotated" start:
• AlpineSix_56, Amao_42, Batiatus_71, Beanstalk_80, BigBubba_42, Bipolar_50, Blarby_62, Blexus_49, BlueCrab_48, BodEinwohner17_52, Boomer_53, Brushbloom_74, Che9d_57, Cheesepuff_88, Cheesepuff_94, ChotaBhai_42, Cornie_44, Cornie_84, DaWorst_52, Daenerys_46, DeadP_56, Deb65_47, Demsculpinboyz_60, DoctorDiddles_42, Donkeykong_54, Doomphist_50, Doug_53, Eish_52, EleanorGeorge_84, EmiMonkey_48, Empress_50, Estave1_51, Filuzino_81, Florinda_63, Fushigi_74, Gaia_47, Gandalph_52, Geralt_47, Holt_43, Homines_52, IbOuu_53, JalFarm20_61, Jinglebell_56, Job42_51, JoeyJr_47, KingMidas_51, KristaRAM_52, Leperchaun_44, Llama_56, Mindy_43, Modragons_55, Nebkiss_50, Nimbo_46, Ochi17_54, OfUltron_56, Oksu_55, OldBen_49, OlympiaSaint_51, Ovechkin_75, OwlsT2W_50, PHappiness_47, PMC_45, Pacc40_46, Pat3_41, Phanphagia_48, Phasih_48, PhlipPhlop_50, Plumbus_53, Poenanya_50, Polka14_48, Pollywog_51, Quico_60, Radiance_51, Ramsey_52, Renaud18_56, RitaG_47, Rockne_49, RockyHorror_51, Sandalphon_53, ScoobyDoobyDoo_3, Scottish_50, Seabastian_56, Shauna1_48, ShroomBoi_53, SirDuracell_41, Spikelee_57, Spoonbill_49, Squirty_54, Stap_50, SuperGrey_53, Taj_54, ThetaBob_55, Topiatin_56, Topiatin_86, Tweety_50, Vivum_55, Wee_53, Zerg_50,

Summary by start number:

Start 19:
• Found in 6 of 170 (3.5%) of genes in pham
• No Manual Annotations of this start.
• Called 16.7% of time when present
• Phage (with cluster) where this start called: Blarby_62 (F),

Start 27:
• Found in 1 of 170 (0.6%) of genes in pham
• Manual Annotations of this start: 1 of 149
• Called 100.0% of time when present
• Phage (with cluster) where this start called: EleanorGeorge_84 (F1),

Start 28:
• Found in 6 of 170 (3.5%) of genes in pham
• Manual Annotations of this start: 5 of 149
• Called 83.3% of time when present
• Phage (with cluster) where this start called: DeadP_56 (F1), Estave1_51 (F1), Renaud18_56 (F4), Taj_54 (F1), Wee_53 (F1),

Start 33:
• Found in 5 of 170 (2.9%) of genes in pham
• Manual Annotations of this start: 2 of 149
• Called 60.0% of time when present
• Phage (with cluster) where this start called: Florinda_63 (F1), Quico_60 (F1), Topiatin_56 (F1),

Start 41:
• Found in 2 of 170 (1.2%) of genes in pham
• Manual Annotations of this start: 1 of 149
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Cheesepuff_94 (F1),

Start 44:
• Found in 2 of 170 (1.2%) of genes in pham
• Manual Annotations of this start: 1 of 149
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Fushigi_74 (A1),

Start 45:
• Found in 1 of 170 (0.6%) of genes in pham
• Manual Annotations of this start: 1 of 149
• Called 100.0% of time when present
• Phage (with cluster) where this start called: OlympiaSaint_51 (F1),

Start 46:
• Found in 7 of 170 (4.1%) of genes in pham
• Manual Annotations of this start: 6 of 149
• Called 85.7% of time when present
• Phage (with cluster) where this start called: Bipolar_50 (F1), Donkeykong_54 (F1),
JalFarm20_61 (F1), Phanphagia_48 (F1), Shauna1_48 (F1), SuperGrey_53 (F1),

Start 47:
• Found in 8 of 170 (4.7%) of genes in pham
• Manual Annotations of this start: 1 of 149
• Called 25.0% of time when present
• Phage (with cluster) where this start called: Beanstalk_80 (F1), KristaRAM_52 (F1),

Start 49:
• Found in 3 of 170 (1.8%) of genes in pham
• Manual Annotations of this start: 2 of 149
• Called 66.7% of time when present
• Phage (with cluster) where this start called: DoctorDiddles_42 (E), Holt_43 (E),

Start 50:
• Found in 11 of 170 (6.5%) 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: Che9d_57 (F2), Cornie_44 (F5),
Demsculpinboyz_60 (F2), Eish_52 (F1), Gandalph_52 (F1), OwlsT2W_50 (F1),
Plumbus_53 (F1), Pollywog_51 (F1), Ramsey_52 (F1), ThetaBob_55 (F4),
Tweety_50 (F1),

Start 51:
• Found in 1 of 170 (0.6%) of genes in pham
• Manual Annotations of this start: 1 of 149
• Called 100.0% of time when present
• Phage (with cluster) where this start called: ShroomBoi_53 (F1),

Start 53:
• Found in 12 of 170 (7.1%) of genes in pham
• Manual Annotations of this start: 8 of 149
• Called 83.3% of time when present
• Phage (with cluster) where this start called: Amao_42 (E), BigBubba_42 (E), ChotaBhai_42 (E), Cornie_84 (F5), Gaia_47 (X), Mindy_43 (E), Nebkiss_50 (X), ScoobyDoobyDoo_3 (C2), SirDuracell_41 (E), Topiatin_86 (F1),

Start 57:
• Found in 9 of 170 (5.3%) of genes in pham
• Manual Annotations of this start: 1 of 149
• Called 11.1% of time when present
• Phage (with cluster) where this start called: Pat3_41 (E),

Start 58:
• Found in 7 of 170 (4.1%) of genes in pham
• Manual Annotations of this start: 1 of 149
• Called 14.3% of time when present
• Phage (with cluster) where this start called: Squirty_54 (F3),

Start 60:
• Found in 47 of 170 (27.6%) of genes in pham
• Manual Annotations of this start: 34 of 149
• Called 80.9% of time when present
• Phage (with cluster) where this start called: Blexus_49 (F1), BlueCrab_48 (F1), BodEinwohner17_52 (F1), Boomer_53 (F1), DaWorst_52 (F1), Daenerys_46 (F1), Deb65_47 (F1), Doomphist_50 (F1), Doug_53 (F1), EmiMonkey_48 (F1), Empress_50 (F1), Geralt_47 (F1), IbOuu_53 (F1), Job42_51 (F1), JoeyJr_47 (F1), KingMidas_51 (F1), Leperchaun_44 (F1), Nimbo_46 (F1), Oksu_55 (F1), OldBen_49 (F1), PHappiness_47 (F1), PMC_45 (F1), Pacc40_46 (F1), Phasih_48 (F1), PhlipPhlop_50 (F1), Poenanya_50 (F1), Polka14_48 (F1), Radiance_51 (F1), RitaG_47 (F1), Rockne_49 (F1), RockyHorror_51 (F1), Sandalphon_53 (F1), Scottish_50 (F1), Spikelee_57 (F1), Spoonbill_49 (F1), Stap_50 (F1), Vivum_55 (F1), Zerg_50 (F1),

Start 67:
• Found in 2 of 170 (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: Filuzino_81 (F1), Homines_52 (A1),

Start 72:
• Found in 7 of 170 (4.1%) 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: AlpineSix_56 (F1), Jinglebell_56 (F1), Llama_56 (F1), Modragons_55 (F1), Ochi17_54 (F1), OfUltron_56 (F1), Seabastian_56 (F1),

Start 76:
• Found in 72 of 170 (42.4%) of genes in pham
• Manual Annotations of this start: 60 of 149
• Called 100.0% of time when present

• Phage (with cluster) where this start called: Akhila_79 (F1), Ariel_74 (J), BadAgartude_18 (C1), Bagrid_73 (J), Balomoji_41 (E), Batiatus_82 (F1), Beem_74 (J), BigPhil_75 (F1), Bipolar_85 (F1), BronnyJames_69 (J), Brookers_77 (F1), Cali_18 (C1), Cerasum_76 (F1), Che8_87 (F1), Coco12_79 (F1), Courthouse_71 (J), Daikon_43 (E), Dallas_73 (J), DmpstrDiver_74 (J), Donkeykong_87 (F1), Ejimix_74 (J), Enzomatic_92 (F1), EricMillard_73 (J), Flypotenuse_37 (E), Gator_40 (E), Glexan_40 (E), Halley_76 (J), Harella_42 (E), HokkenD_67 (J), Hughesyang_73 (J), IrishSherpFalk_82 (F1), Jant_83 (F1), JuicyJay_73 (J), Kalah2_69 (J), Kingsley_86 (F1), KristaRAM_80 (F1), Kumao_60 (singleton), LilBib_61 (A1), LittleE_76 (J), Lucky2013_72 (J), LunaBlu_85 (F1), MadMen_88 (F1), Marker_88 (F1), MiaZeal_75 (J), MilanaBonita_78 (F1), Mozy_89 (F1), Ms6_83 (F1), Mwanjiwa_85 (F1), NewHope4_85 (F1), NihilNomen_75 (J), Odette_73 (J), Ogopogo_88 (F1), Phoebus_77 (J), Polo2Bam_91 (F1), Porcelain_74 (J), Rearden_67 (J), Redno2_71 (J), Sarma624_81 (F1), Schatzie_69 (J), Shaboozey_68 (J), Soul22_83 (F2), Spartacus_88 (F1), Sprinklers_17 (C1), Squint_75 (J), Superphikiman_72 (J), Tchotchke_77 (F1), ThreeRngTarjay_72 (J), Traaww1_39 (E), Velveteen_76 (F1), WillSterrel_81 (F1), Yeet_70 (J), Zelink_72 (J),

Start 78:
• Found in 46 of 170 (27.1%) of genes in pham
• Manual Annotations of this start: 1 of 149
• Called 2.2% of time when present
• Phage (with cluster) where this start called: Cheesepuff_88 (F1),

Start 82:
• Found in 4 of 170 (2.4%) of genes in pham
• Manual Annotations of this start: 3 of 149
• Called 75.0% of time when present
• Phage (with cluster) where this start called: Batiatus_71 (F1), Brushbloom_74 (F1), Ovechkin_75 (F1),

Summary by clusters:

There are 13 clusters represented in this pham: F1, singleton, F3, E, F5, F, J, F2, A1, X, F4, C1, C2,

Info for manual annotations of cluster A1:
•Start number 44 was manually annotated 1 time for cluster A1.
•Start number 67 was manually annotated 1 time for cluster A1.
•Start number 76 was manually annotated 1 time for cluster A1.

Info for manual annotations of cluster C1:
•Start number 76 was manually annotated 3 times for cluster C1.

Info for manual annotations of cluster C2:
•Start number 53 was manually annotated 1 time for cluster C2.

Info for manual annotations of cluster E:
•Start number 49 was manually annotated 2 times for cluster E.
•Start number 53 was manually annotated 4 times for cluster E.
•Start number 57 was manually annotated 1 time for cluster E.
•Start number 76 was manually annotated 6 times for cluster E.

Info for manual annotations of cluster F1:
•Start number 27 was manually annotated 1 time for cluster F1.
•Start number 28 was manually annotated 4 times for cluster F1.
•Start number 33 was manually annotated 2 times for cluster F1.
•Start number 41 was manually annotated 1 time for cluster F1.
•Start number 45 was manually annotated 1 time for cluster F1.
•Start number 46 was manually annotated 6 times for cluster F1.
•Start number 47 was manually annotated 1 time for cluster F1.
•Start number 50 was manually annotated 7 times for cluster F1.
•Start number 51 was manually annotated 1 time for cluster F1.
•Start number 60 was manually annotated 34 times for cluster F1.
•Start number 67 was manually annotated 1 time for cluster F1.
•Start number 72 was manually annotated 7 times for cluster F1.
•Start number 76 was manually annotated 23 times for cluster F1.
•Start number 78 was manually annotated 1 time for cluster F1.
•Start number 82 was manually annotated 3 times for cluster F1.

Info for manual annotations of cluster F2:
•Start number 50 was manually annotated 2 times for cluster F2.
•Start number 76 was manually annotated 1 time for cluster F2.

Info for manual annotations of cluster F3:
•Start number 58 was manually annotated 1 time for cluster F3.

Info for manual annotations of cluster F4:
•Start number 28 was manually annotated 1 time for cluster F4.
•Start number 50 was manually annotated 1 time for cluster F4.

Info for manual annotations of cluster F5:
•Start number 50 was manually annotated 1 time for cluster F5.
•Start number 53 was manually annotated 1 time for cluster F5.

Info for manual annotations of cluster J:
•Start number 76 was manually annotated 25 times for cluster J.

Info for manual annotations of cluster X:
•Start number 53 was manually annotated 2 times for cluster X.

Gene Information:
Gene: Akhila_79 Start: 48285, Stop: 48626, Start Num: 76
Candidate Starts for Akhila_79:
(Start: 76 @48285 has 60 MA's), (89, 48333), (98, 48393), (103, 48426), (127, 48555), (128, 48558), (130, 48588), (133, 48612),

Gene: AlpineSix_56 Start: 38900, Stop: 39235, Start Num: 72
Candidate Starts for AlpineSix_56:
(Start: 72 @38900 has 7 MA's), (Start: 78 @38933 has 1 MA's), (83, 38960), (86, 38972), (89, 38984), (103, 39068), (114, 39134), (125, 39170), (130, 39209),

Gene: Amao_42 Start: 34812, Stop: 34333, Start Num: 53
Candidate Starts for Amao_42:
(24, 34905), (37, 34860), (Start: 53 @34812 has 8 MA's), (83, 34674), (89, 34650), (94, 34626), (100, 34581), (105, 34515), (119, 34416), (131, 34344),

Gene: Ariel_74 Start: 47072, Stop: 46704, Start Num: 76
Candidate Starts for Ariel_74:
(Start: 76 @47072 has 60 MA's), (89, 47024), (98, 46964), (103, 46931), (107, 46886), (108, 46880), (128, 46781), (130, 46742), (133, 46718),

Gene: BadAgartude_18 Start: 5785, Stop: 6153, Start Num: 76
Candidate Starts for BadAgartude_18:
(Start: 76 @5785 has 60 MA's), (89, 5833), (98, 5893), (103, 5926), (107, 5971), (108, 5977), (128, 6076), (130, 6115), (133, 6139),

Gene: Bagrid_73 Start: 50489, Stop: 50121, Start Num: 76
Candidate Starts for Bagrid_73:
(Start: 76 @50489 has 60 MA's), (89, 50441), (98, 50381), (103, 50348), (107, 50303), (108, 50297), (128, 50198), (130, 50159), (133, 50135),

Gene: Balomoji_41 Start: 35435, Stop: 35067, Start Num: 76
Candidate Starts for Balomoji_41:
(Start: 76 @35435 has 60 MA's), (89, 35387), (98, 35327), (103, 35294), (107, 35249), (108, 35243), (128, 35144), (130, 35105), (133, 35081),

Gene: Batiatus_82 Start: 49370, Stop: 49711, Start Num: 76
Candidate Starts for Batiatus_82:
(Start: 76 @49370 has 60 MA's), (89, 49418), (98, 49478), (103, 49511), (127, 49640), (128, 49643), (130, 49673), (133, 49697),

Gene: Batiatus_71 Start: 45087, Stop: 45425, Start Num: 82
Candidate Starts for Batiatus_71:
(Start: 82 @45087 has 3 MA's), (102, 45180), (116, 45288), (130, 45366),

Gene: Beanstalk_80 Start: 48314, Stop: 48784, Start Num: 47
Candidate Starts for Beanstalk_80:
(29, 48257), (Start: 47 @48314 has 1 MA's), (55, 48347), (73, 48398), (103, 48557), (107, 48602), (108, 48608), (128, 48707), (130, 48746), (133, 48770),

Gene: Beem_74 Start: 51349, Stop: 50981, Start Num: 76
Candidate Starts for Beem_74:
(Start: 76 @51349 has 60 MA's), (89, 51301), (98, 51241), (103, 51208), (107, 51163), (108, 51157), (128, 51058), (130, 51019), (133, 50995),

Gene: BigBubba_42 Start: 34670, Stop: 34191, Start Num: 53
Candidate Starts for BigBubba_42:
(1, 35006), (2, 35003), (3, 34997), (4, 34988), (17, 34829), (21, 34799), (Start: 53 @34670 has 8 MA's), (79, 34550), (83, 34532), (89, 34508), (94, 34484), (100, 34439), (105, 34373), (119, 34274), (131, 34202),

Gene: BigPhil_75 Start: 45204, Stop: 45548, Start Num: 76
Candidate Starts for BigPhil_75:
(Start: 76 @45204 has 60 MA's), (89, 45252), (98, 45312), (130, 45510), (133, 45534),

Gene: Bipolar_50 Start: 37100, Stop: 37534, Start Num: 46
Candidate Starts for Bipolar_50:
(Start: 46 @37100 has 6 MA's), (Start: 47 @37103 has 1 MA's), (54, 37130), (63, 37157), (70, 37181), (103, 37340), (127, 37469), (128, 37472), (130, 37502), (134, 37523),

Gene: Bipolar_85 Start: 50898, Stop: 51242, Start Num: 76
Candidate Starts for Bipolar_85:
(Start: 76 @50898 has 60 MA's), (89, 50946), (98, 51006), (130, 51204), (133, 51228),

Gene: Blarby_62 Start: 37522, Stop: 38091, Start Num: 19
Candidate Starts for Blarby_62:
(5, 37411), (9, 37444), (12, 37459), (15, 37489), (16, 37492), (17, 37495), (19, 37522), (22, 37531), (Start: 28 @37582 has 5 MA's), (40, 37618), (Start: 58 @37675 has 1 MA's), (65, 37708), (71, 37729), (103, 37903), (127, 38032), (128, 38035), (130, 38065),

Gene: Blexus_49 Start: 36674, Stop: 37057, Start Num: 60
Candidate Starts for Blexus_49:
(Start: 60 @36674 has 34 MA's), (62, 36683), (Start: 78 @36746 has 1 MA's), (81, 36770), (103, 36887), (114, 36953), (125, 36989), (130, 37028),

Gene: BlueCrab_48 Start: 36400, Stop: 36783, Start Num: 60
Candidate Starts for BlueCrab_48:
(Start: 60 @36400 has 34 MA's), (62, 36409), (Start: 78 @36472 has 1 MA's), (81, 36496), (103, 36613), (114, 36679), (125, 36715), (130, 36754),

Gene: BodEinwohner17_52 Start: 36616, Stop: 36999, Start Num: 60
Candidate Starts for BodEinwohner17_52:
(Start: 60 @36616 has 34 MA's), (62, 36625), (Start: 78 @36688 has 1 MA's), (81, 36712), (103, 36829), (114, 36895), (125, 36931), (130, 36970),

Gene: Boomer_53 Start: 37849, Stop: 38232, Start Num: 60
Candidate Starts for Boomer_53:
(Start: 60 @37849 has 34 MA's), (62, 37858), (Start: 78 @37921 has 1 MA's), (81, 37945), (103, 38062), (114, 38128), (125, 38164), (130, 38203),

Gene: BronnyJames_69 Start: 45688, Stop: 45320, Start Num: 76
Candidate Starts for BronnyJames_69:
(Start: 76 @45688 has 60 MA's), (89, 45640), (98, 45580), (103, 45547), (107, 45502), (108, 45496), (128, 45397), (130, 45358), (133, 45334),

Gene: Brookers_77 Start: 48155, Stop: 48499, Start Num: 76
Candidate Starts for Brookers_77:
(Start: 76 @48155 has 60 MA's), (89, 48203), (98, 48263), (130, 48461), (133, 48485),

Gene: Brushbloom_74 Start: 46019, Stop: 46342, Start Num: 82
Candidate Starts for Brushbloom_74:
(30, 45821), (32, 45824), (35, 45833), (39, 45851), (Start: 82 @46019 has 3 MA's), (102, 46112), (127, 46250), (128, 46253), (130, 46283),

Gene: Cali_18 Start: 6761, Stop: 7129, Start Num: 76
Candidate Starts for Cali_18:

(Start: 76 @6761 has 60 MA's), (89, 6809), (98, 6869), (103, 6902), (107, 6947), (108, 6953), (128, 7052), (130, 7091), (133, 7115),

Gene: Cerasum_76 Start: 45222, Stop: 45566, Start Num: 76
Candidate Starts for Cerasum_76:
(Start: 76 @45222 has 60 MA's), (89, 45270), (98, 45330), (130, 45528), (133, 45552),

Gene: Che8_87 Start: 50151, Stop: 50519, Start Num: 76
Candidate Starts for Che8_87:
(Start: 76 @50151 has 60 MA's), (89, 50199), (98, 50259), (103, 50292), (107, 50337), (108, 50343), (128, 50442), (130, 50481), (133, 50505),

Gene: Che9d_57 Start: 36146, Stop: 36583, Start Num: 50
Candidate Starts for Che9d_57:
(Start: 50 @36146 has 11 MA's), (74, 36230), (75, 36239), (83, 36275), (96, 36347), (103, 36389), (109, 36449),

Gene: Cheesepuff_88 Start: 48668, Stop: 49036, Start Num: 78
Candidate Starts for Cheesepuff_88:
(Start: 78 @48668 has 1 MA's), (89, 48716), (98, 48776), (103, 48809), (107, 48854), (108, 48860), (128, 48959), (130, 48998), (133, 49022),

Gene: Cheesepuff_94 Start: 50399, Stop: 50833, Start Num: 41
Candidate Starts for Cheesepuff_94:
(Start: 33 @50369 has 2 MA's), (36, 50378), (Start: 41 @50399 has 1 MA's), (Start: 53 @50432 has 8 MA's), (Start: 57 @50444 has 1 MA's), (74, 50507), (79, 50522), (88, 50549), (91, 50555), (95, 50600), (98, 50612), (104, 50666), (112, 50723), (129, 50789),

Gene: ChotaBhai_42 Start: 34264, Stop: 33785, Start Num: 53
Candidate Starts for ChotaBhai_42:
(42, 34303), (Start: 53 @34264 has 8 MA's), (Start: 57 @34252 has 1 MA's), (83, 34126), (85, 34117), (89, 34102), (94, 34078), (100, 34033), (105, 33967), (119, 33868), (131, 33796),

Gene: Coco12_79 Start: 49279, Stop: 49623, Start Num: 76
Candidate Starts for Coco12_79:
(Start: 76 @49279 has 60 MA's), (89, 49327), (98, 49387), (130, 49585), (133, 49609),

Gene: Cornie_84 Start: 49125, Stop: 49526, Start Num: 53
Candidate Starts for Cornie_84:
(8, 48918), (10, 48927), (14, 48951), (16, 48969), (Start: 33 @49062 has 2 MA's), (36, 49071), (Start: 41 @49092 has 1 MA's), (Start: 53 @49125 has 8 MA's), (Start: 57 @49137 has 1 MA's), (74, 49200), (79, 49215), (88, 49242), (91, 49248), (95, 49293), (98, 49305), (104, 49359), (112, 49416), (129, 49482),

Gene: Cornie_44 Start: 34732, Stop: 35169, Start Num: 50
Candidate Starts for Cornie_44:
(Start: 50 @34732 has 11 MA's), (56, 34756), (Start: 82 @34858 has 3 MA's), (103, 34975), (127, 35104), (128, 35107), (130, 35137), (134, 35158),

Gene: Courthouse_71 Start: 46710, Stop: 46342, Start Num: 76
Candidate Starts for Courthouse_71:
(Start: 76 @46710 has 60 MA's), (98, 46602), (103, 46569), (107, 46524), (108, 46518), (128, 46419), (130, 46380), (133, 46356),

Gene: DaWorst_52 Start: 37475, Stop: 37858, Start Num: 60
Candidate Starts for DaWorst_52:
(Start: 60 @37475 has 34 MA's), (62, 37484), (Start: 78 @37547 has 1 MA's), (81, 37571), (103, 37688), (114, 37754), (125, 37790), (130, 37829),

Gene: Daenerys_46 Start: 35343, Stop: 35726, Start Num: 60
Candidate Starts for Daenerys_46:
(Start: 60 @35343 has 34 MA's), (62, 35352), (Start: 78 @35415 has 1 MA's), (81, 35439), (103, 35556), (114, 35622), (125, 35658), (130, 35697),

Gene: Daikon_43 Start: 35456, Stop: 35088, Start Num: 76
Candidate Starts for Daikon_43:
(Start: 76 @35456 has 60 MA's), (89, 35408), (98, 35348), (103, 35315), (107, 35270), (108, 35264), (128, 35165), (130, 35126), (133, 35102),

Gene: Dallas_73 Start: 50270, Stop: 49902, Start Num: 76
Candidate Starts for Dallas_73:
(Start: 76 @50270 has 60 MA's), (89, 50222), (98, 50162), (103, 50129), (107, 50084), (108, 50078), (128, 49979), (130, 49940), (133, 49916),

Gene: DeadP_56 Start: 38235, Stop: 38747, Start Num: 28
Candidate Starts for DeadP_56:
(5, 38067), (9, 38100), (12, 38115), (15, 38145), (16, 38148), (19, 38175), (22, 38184), (Start: 28 @38235 has 5 MA's), (40, 38271), (Start: 58 @38328 has 1 MA's), (65, 38361), (71, 38382), (98, 38523), (103, 38556), (130, 38721),

Gene: Deb65_47 Start: 35312, Stop: 35695, Start Num: 60
Candidate Starts for Deb65_47:
(Start: 60 @35312 has 34 MA's), (62, 35321), (Start: 78 @35384 has 1 MA's), (81, 35408), (103, 35525), (114, 35591), (125, 35627), (130, 35666),

Gene: Demsculpinboyz_60 Start: 36255, Stop: 36692, Start Num: 50
Candidate Starts for Demsculpinboyz_60:
(Start: 50 @36255 has 11 MA's), (74, 36339), (75, 36348), (83, 36384), (96, 36456), (103, 36498), (109, 36558),

Gene: DmpstrDiver_74 Start: 50697, Stop: 50329, Start Num: 76
Candidate Starts for DmpstrDiver_74:
(Start: 76 @50697 has 60 MA's), (89, 50649), (98, 50589), (103, 50556), (107, 50511), (108, 50505), (128, 50406), (130, 50367), (133, 50343),

Gene: DoctorDiddles_42 Start: 34192, Stop: 33701, Start Num: 49
Candidate Starts for DoctorDiddles_42:
(Start: 49 @34192 has 2 MA's), (83, 34042), (85, 34033), (89, 34018), (94, 33994), (100, 33949), (105, 33883), (119, 33784), (131, 33712),

Gene: Donkeykong_54 Start: 39346, Stop: 39780, Start Num: 46
Candidate Starts for Donkeykong_54:
(Start: 46 @39346 has 6 MA's), (Start: 47 @39349 has 1 MA's), (54, 39376), (63, 39403), (70, 39427), (103, 39586), (127, 39715), (128, 39718), (130, 39748), (134, 39769),

Gene: Donkeykong_87 Start: 51001, Stop: 51345, Start Num: 76

Candidate Starts for Donkeykong_87:
(24, 50827), (26, 50833), (Start: 76 @51001 has 60 MA's), (89, 51049), (98, 51109), (130, 51307), (133, 51331),

Gene: Doomphist_50 Start: 37614, Stop: 37997, Start Num: 60
Candidate Starts for Doomphist_50:
(Start: 60 @37614 has 34 MA's), (62, 37623), (Start: 78 @37686 has 1 MA's), (81, 37710), (103, 37827), (114, 37893), (125, 37929), (130, 37968),

Gene: Doug_53 Start: 37732, Stop: 38115, Start Num: 60
Candidate Starts for Doug_53:
(Start: 60 @37732 has 34 MA's), (62, 37741), (Start: 78 @37804 has 1 MA's), (81, 37828), (103, 37945), (114, 38011), (125, 38047), (130, 38086),

Gene: Eish_52 Start: 37152, Stop: 37565, Start Num: 50
Candidate Starts for Eish_52:
(Start: 50 @37152 has 11 MA's), (Start: 60 @37185 has 34 MA's), (66, 37212), (73, 37236), (103, 37395), (114, 37461), (125, 37497), (130, 37536),

Gene: Ejimix_74 Start: 52138, Stop: 51770, Start Num: 76
Candidate Starts for Ejimix_74:
(Start: 76 @52138 has 60 MA's), (89, 52090), (98, 52030), (103, 51997), (107, 51952), (108, 51946), (128, 51847), (130, 51808), (133, 51784),

Gene: EleanorGeorge_84 Start: 49979, Stop: 50533, Start Num: 27
Candidate Starts for EleanorGeorge_84:
(6, 49826), (7, 49835), (11, 49859), (13, 49877), (25, 49970), (Start: 27 @49979 has 1 MA's), (34, 50000), (Start: 44 @50033 has 1 MA's), (48, 50045), (64, 50108), (69, 50132), (77, 50174), (130, 50495), (133, 50519),

Gene: EmiMonkey_48 Start: 37891, Stop: 38274, Start Num: 60
Candidate Starts for EmiMonkey_48:
(Start: 60 @37891 has 34 MA's), (62, 37900), (Start: 78 @37963 has 1 MA's), (81, 37987), (103, 38104), (114, 38170), (125, 38206), (130, 38245),

Gene: Empress_50 Start: 36757, Stop: 37140, Start Num: 60
Candidate Starts for Empress_50:
(Start: 60 @36757 has 34 MA's), (62, 36766), (Start: 78 @36829 has 1 MA's), (81, 36853), (103, 36970), (114, 37036), (125, 37072), (130, 37111),

Gene: Enzomatic_92 Start: 47700, Stop: 48044, Start Num: 76
Candidate Starts for Enzomatic_92:
(Start: 76 @47700 has 60 MA's), (89, 47748), (98, 47808), (130, 48006), (133, 48030),

Gene: EricMillard_73 Start: 51342, Stop: 50974, Start Num: 76
Candidate Starts for EricMillard_73:
(Start: 76 @51342 has 60 MA's), (89, 51294), (98, 51234), (103, 51201), (107, 51156), (108, 51150), (128, 51051), (130, 51012), (133, 50988),

Gene: Estave1_51 Start: 36423, Stop: 36932, Start Num: 28
Candidate Starts for Estave1_51:
(5, 36255), (9, 36288), (12, 36303), (15, 36333), (16, 36336), (19, 36363), (22, 36372), (Start: 28 @36423 has 5 MA's), (40, 36459), (Start: 58 @36516 has 1 MA's), (65, 36549), (71, 36570), (103,

36744), (127, 36873), (128, 36876), (130, 36906),

Gene: Filuzino_81 Start: 50456, Stop: 50911, Start Num: 67
Candidate Starts for Filuzino_81:
(43, 50363), (Start: 67 @50456 has 2 MA's), (70, 50468), (80, 50531), (84, 50546), (90, 50573), (92, 50579), (96, 50627), (103, 50669), (121, 50780), (130, 50849), (135, 50891),

Gene: Florinda_63 Start: 39217, Stop: 39705, Start Num: 33
Candidate Starts for Florinda_63:
(Start: 33 @39217 has 2 MA's), (36, 39226), (Start: 57 @39301 has 1 MA's), (61, 39310), (68, 39346), (81, 39418), (87, 39439), (103, 39535), (114, 39601), (125, 39637), (130, 39676),

Gene: Flypotenuse_37 Start: 34187, Stop: 33819, Start Num: 76
Candidate Starts for Flypotenuse_37:
(Start: 76 @34187 has 60 MA's), (89, 34139), (98, 34079), (103, 34046), (107, 34001), (108, 33995), (128, 33896), (130, 33857), (133, 33833),

Gene: Fushigi_74 Start: 44956, Stop: 44495, Start Num: 44
Candidate Starts for Fushigi_74:
(18, 45070), (Start: 44 @44956 has 1 MA's), (81, 44821), (89, 44797), (94, 44773), (100, 44728), (130, 44533), (133, 44509),

Gene: Gaia_47 Start: 36098, Stop: 35730, Start Num: 53
Candidate Starts for Gaia_47:
(Start: 53 @36098 has 8 MA's), (83, 36005), (113, 35789), (115, 35771), (123, 35753),

Gene: Gandalph_52 Start: 36543, Stop: 36980, Start Num: 50
Candidate Starts for Gandalph_52:
(Start: 50 @36543 has 11 MA's), (Start: 60 @36576 has 34 MA's), (66, 36603), (73, 36627), (103, 36786), (107, 36831), (130, 36954),

Gene: Gator_40 Start: 35326, Stop: 34958, Start Num: 76
Candidate Starts for Gator_40:
(Start: 76 @35326 has 60 MA's), (89, 35278), (98, 35218), (103, 35185), (107, 35140), (108, 35134), (128, 35035), (130, 34996), (133, 34972),

Gene: Geralt_47 Start: 35311, Stop: 35694, Start Num: 60
Candidate Starts for Geralt_47:
(Start: 60 @35311 has 34 MA's), (62, 35320), (Start: 78 @35383 has 1 MA's), (81, 35407), (103, 35524), (114, 35590), (125, 35626), (130, 35665),

Gene: Glexan_40 Start: 35314, Stop: 34946, Start Num: 76
Candidate Starts for Glexan_40:
(Start: 76 @35314 has 60 MA's), (89, 35266), (98, 35206), (103, 35173), (107, 35128), (108, 35122), (128, 35023), (130, 34984), (133, 34960),

Gene: Halley_76 Start: 51349, Stop: 50981, Start Num: 76
Candidate Starts for Halley_76:
(Start: 76 @51349 has 60 MA's), (89, 51301), (98, 51241), (103, 51208), (107, 51163), (108, 51157), (128, 51058), (130, 51019), (133, 50995),

Gene: Harella_42 Start: 35830, Stop: 35462, Start Num: 76
Candidate Starts for Harella_42:

(Start: 76 @35830 has 60 MA's), (89, 35782), (98, 35722), (103, 35689), (107, 35644), (108, 35638), (128, 35539), (130, 35500), (133, 35476),

Gene: HokkenD_67 Start: 49618, Stop: 49250, Start Num: 76
Candidate Starts for HokkenD_67:
(Start: 76 @49618 has 60 MA's), (89, 49570), (98, 49510), (103, 49477), (107, 49432), (108, 49426), (128, 49327), (130, 49288), (133, 49264),

Gene: Holt_43 Start: 34307, Stop: 33816, Start Num: 49
Candidate Starts for Holt_43:
(Start: 49 @34307 has 2 MA's), (83, 34157), (85, 34148), (89, 34133), (94, 34109), (100, 34064), (105, 33998), (119, 33899), (131, 33827),

Gene: Homines_52 Start: 36648, Stop: 36226, Start Num: 67
Candidate Starts for Homines_52:
(43, 36741), (Start: 67 @36648 has 2 MA's), (70, 36636), (80, 36573), (84, 36558), (90, 36531), (92, 36525), (96, 36477), (103, 36435), (121, 36324), (130, 36255),

Gene: Hughesyang_73 Start: 51308, Stop: 50940, Start Num: 76
Candidate Starts for Hughesyang_73:
(Start: 76 @51308 has 60 MA's), (89, 51260), (98, 51200), (103, 51167), (107, 51122), (108, 51116), (128, 51017), (130, 50978), (133, 50954),

Gene: IbOuu_53 Start: 37593, Stop: 37976, Start Num: 60
Candidate Starts for IbOuu_53:
(Start: 60 @37593 has 34 MA's), (62, 37602), (Start: 78 @37665 has 1 MA's), (81, 37689), (103, 37806), (114, 37872), (125, 37908), (130, 37947),

Gene: IrishSherpFalk_82 Start: 49608, Stop: 50033, Start Num: 76
Candidate Starts for IrishSherpFalk_82:
(Start: 76 @49608 has 60 MA's), (106, 49803), (110, 49845), (117, 49905), (119, 49914), (128, 49950), (130, 49995), (133, 50019),

Gene: JalFarm20_61 Start: 39841, Stop: 40275, Start Num: 46
Candidate Starts for JalFarm20_61:
(Start: 46 @39841 has 6 MA's), (Start: 47 @39844 has 1 MA's), (54, 39871), (63, 39898), (70, 39922), (103, 40081), (127, 40210), (128, 40213), (130, 40243), (134, 40264),

Gene: Jant_83 Start: 47663, Stop: 48031, Start Num: 76
Candidate Starts for Jant_83:
(Start: 76 @47663 has 60 MA's), (89, 47711), (98, 47771), (103, 47804), (107, 47849), (108, 47855), (128, 47954), (130, 47993), (133, 48017),

Gene: Jinglebell_56 Start: 38899, Stop: 39234, Start Num: 72
Candidate Starts for Jinglebell_56:
(Start: 72 @38899 has 7 MA's), (Start: 78 @38932 has 1 MA's), (83, 38959), (86, 38971), (89, 38983), (103, 39067), (114, 39133), (125, 39169), (130, 39208),

Gene: Job42_51 Start: 38265, Stop: 38648, Start Num: 60
Candidate Starts for Job42_51:
(Start: 60 @38265 has 34 MA's), (62, 38274), (Start: 78 @38337 has 1 MA's), (81, 38361), (114, 38544), (125, 38580), (130, 38619),

Gene: JoeyJr_47 Start: 35511, Stop: 35894, Start Num: 60
Candidate Starts for JoeyJr_47:
(Start: 60 @35511 has 34 MA's), (62, 35520), (Start: 78 @35583 has 1 MA's), (81, 35607), (103, 35724), (114, 35790), (125, 35826), (130, 35865),

Gene: JuicyJay_73 Start: 52483, Stop: 52115, Start Num: 76
Candidate Starts for JuicyJay_73:
(Start: 76 @52483 has 60 MA's), (89, 52435), (98, 52375), (103, 52342), (107, 52297), (108, 52291), (128, 52192), (130, 52153), (133, 52129),

Gene: Kalah2_69 Start: 50642, Stop: 50274, Start Num: 76
Candidate Starts for Kalah2_69:
(Start: 76 @50642 has 60 MA's), (89, 50594), (98, 50534), (103, 50501), (107, 50456), (108, 50450), (128, 50351), (130, 50312), (133, 50288),

Gene: KingMidas_51 Start: 37173, Stop: 37556, Start Num: 60
Candidate Starts for KingMidas_51:
(Start: 60 @37173 has 34 MA's), (62, 37182), (Start: 78 @37245 has 1 MA's), (81, 37269), (103, 37386), (114, 37452), (125, 37488), (130, 37527),

Gene: Kingsley_86 Start: 51886, Stop: 52230, Start Num: 76
Candidate Starts for Kingsley_86:
(Start: 76 @51886 has 60 MA's), (89, 51934), (98, 51994), (130, 52192), (133, 52216),

Gene: KristaRAM_80 Start: 48204, Stop: 48548, Start Num: 76
Candidate Starts for KristaRAM_80:
(Start: 76 @48204 has 60 MA's), (89, 48252), (98, 48312), (130, 48510), (133, 48534),

Gene: KristaRAM_52 Start: 38472, Stop: 38903, Start Num: 47
Candidate Starts for KristaRAM_52:
(Start: 46 @38469 has 6 MA's), (Start: 47 @38472 has 1 MA's), (54, 38499), (63, 38526), (70, 38550), (103, 38709), (127, 38838), (128, 38841), (130, 38871), (134, 38892),

Gene: Kumao_60 Start: 43284, Stop: 43625, Start Num: 76
Candidate Starts for Kumao_60:
(Start: 76 @43284 has 60 MA's), (89, 43332), (98, 43392), (103, 43425), (127, 43554), (128, 43557), (130, 43587), (133, 43611),

Gene: Leperchaun_44 Start: 34741, Stop: 35124, Start Num: 60
Candidate Starts for Leperchaun_44:
(Start: 60 @34741 has 34 MA's), (62, 34750), (Start: 78 @34813 has 1 MA's), (81, 34837), (103, 34954), (114, 35020), (125, 35056), (130, 35095),

Gene: LilBib_61 Start: 42376, Stop: 42032, Start Num: 76
Candidate Starts for LilBib_61:
(20, 42586), (23, 42577), (Start: 57 @42433 has 1 MA's), (59, 42430), (Start: 76 @42376 has 60 MA's), (89, 42328), (98, 42268), (130, 42070), (133, 42046),

Gene: LittleE_76 Start: 50154, Stop: 49810, Start Num: 76
Candidate Starts for LittleE_76:
(Start: 76 @50154 has 60 MA's), (89, 50106), (98, 50046), (130, 49848), (133, 49824),

Gene: Llama_56 Start: 38897, Stop: 39232, Start Num: 72

Candidate Starts for Llama_56:
(Start: 72 @38897 has 7 MA's), (Start: 78 @38930 has 1 MA's), (83, 38957), (86, 38969), (89, 38981), (103, 39065), (114, 39131), (125, 39167), (130, 39206),

Gene: Lucky2013_72 Start: 47088, Stop: 46720, Start Num: 76
Candidate Starts for Lucky2013_72:
(Start: 76 @47088 has 60 MA's), (89, 47040), (98, 46980), (103, 46947), (107, 46902), (108, 46896), (128, 46797), (130, 46758), (133, 46734),

Gene: LunaBlu_85 Start: 49751, Stop: 50095, Start Num: 76
Candidate Starts for LunaBlu_85:
(Start: 76 @49751 has 60 MA's), (89, 49799), (98, 49859), (130, 50057), (133, 50081),

Gene: MadMen_88 Start: 49877, Stop: 50221, Start Num: 76
Candidate Starts for MadMen_88:
(Start: 76 @49877 has 60 MA's), (89, 49925), (98, 49985), (130, 50183), (133, 50207),

Gene: Marker_88 Start: 49677, Stop: 50045, Start Num: 76
Candidate Starts for Marker_88:
(Start: 76 @49677 has 60 MA's), (89, 49725), (98, 49785), (103, 49818), (107, 49863), (108, 49869), (128, 49968), (130, 50007),

Gene: MiaZeal_75 Start: 47744, Stop: 47376, Start Num: 76
Candidate Starts for MiaZeal_75:
(Start: 76 @47744 has 60 MA's), (89, 47696), (98, 47636), (103, 47603), (107, 47558), (108, 47552), (128, 47453), (130, 47414), (133, 47390),

Gene: MilanaBonita_78 Start: 48285, Stop: 48626, Start Num: 76
Candidate Starts for MilanaBonita_78:
(Start: 76 @48285 has 60 MA's), (89, 48333), (98, 48393), (103, 48426), (127, 48555), (128, 48558), (130, 48588), (133, 48612),

Gene: Mindy_43 Start: 34793, Stop: 34317, Start Num: 53
Candidate Starts for Mindy_43:
(Start: 49 @34808 has 2 MA's), (Start: 53 @34793 has 8 MA's), (83, 34658), (89, 34634), (94, 34610), (100, 34565), (105, 34499), (119, 34400), (124, 34388), (131, 34328),

Gene: Modragons_55 Start: 38743, Stop: 39078, Start Num: 72
Candidate Starts for Modragons_55:
(Start: 72 @38743 has 7 MA's), (Start: 78 @38776 has 1 MA's), (83, 38803), (86, 38815), (89, 38827), (103, 38911), (114, 38977), (125, 39013), (130, 39052),

Gene: Mozy_89 Start: 48614, Stop: 48958, Start Num: 76
Candidate Starts for Mozy_89:
(Start: 76 @48614 has 60 MA's), (89, 48662), (98, 48722), (130, 48920), (133, 48944),

Gene: Ms6_83 Start: 45978, Stop: 46319, Start Num: 76
Candidate Starts for Ms6_83:
(Start: 76 @45978 has 60 MA's), (89, 46026), (98, 46086), (103, 46119), (127, 46248), (128, 46251), (130, 46281), (133, 46305),

Gene: Mwanjiwa_85 Start: 50053, Stop: 50421, Start Num: 76
Candidate Starts for Mwanjiwa_85:

(Start: 76 @50053 has 60 MA's), (89, 50101), (98, 50161), (103, 50194), (107, 50239), (108, 50245), (128, 50344), (130, 50383), (133, 50407),

Gene: Nebkiss_50 Start: 35799, Stop: 35431, Start Num: 53
Candidate Starts for Nebkiss_50:
(Start: 53 @35799 has 8 MA's), (83, 35706), (113, 35490), (115, 35472), (123, 35454),

Gene: NewHope4_85 Start: 47846, Stop: 48190, Start Num: 76
Candidate Starts for NewHope4_85:
(Start: 76 @47846 has 60 MA's), (89, 47894), (98, 47954), (130, 48152), (133, 48176),

Gene: NihilNomen_75 Start: 51436, Stop: 51068, Start Num: 76
Candidate Starts for NihilNomen_75:
(Start: 76 @51436 has 60 MA's), (89, 51388), (98, 51328), (103, 51295), (107, 51250), (108, 51244), (128, 51145), (130, 51106), (133, 51082),

Gene: Nimbo_46 Start: 35314, Stop: 35697, Start Num: 60
Candidate Starts for Nimbo_46:
(Start: 60 @35314 has 34 MA's), (62, 35323), (Start: 78 @35386 has 1 MA's), (81, 35410), (103, 35527), (114, 35593), (125, 35629), (130, 35668),

Gene: Ochi17_54 Start: 38350, Stop: 38685, Start Num: 72
Candidate Starts for Ochi17_54:
(Start: 72 @38350 has 7 MA's), (Start: 78 @38383 has 1 MA's), (83, 38410), (86, 38422), (89, 38434), (103, 38518), (114, 38584), (125, 38620), (130, 38659),

Gene: Odette_73 Start: 50479, Stop: 50111, Start Num: 76
Candidate Starts for Odette_73:
(Start: 76 @50479 has 60 MA's), (89, 50431), (98, 50371), (103, 50338), (107, 50293), (108, 50287), (128, 50188), (130, 50149), (133, 50125),

Gene: OfUltron_56 Start: 38899, Stop: 39234, Start Num: 72
Candidate Starts for OfUltron_56:
(Start: 72 @38899 has 7 MA's), (Start: 78 @38932 has 1 MA's), (83, 38959), (86, 38971), (89, 38983), (103, 39067), (114, 39133), (125, 39169), (130, 39208),

Gene: Ogopogo_88 Start: 49094, Stop: 49438, Start Num: 76
Candidate Starts for Ogopogo_88:
(Start: 76 @49094 has 60 MA's), (89, 49142), (98, 49202), (130, 49400), (133, 49424),

Gene: Oksu_55 Start: 38799, Stop: 39179, Start Num: 60
Candidate Starts for Oksu_55:
(Start: 60 @38799 has 34 MA's), (62, 38808), (Start: 78 @38871 has 1 MA's), (81, 38895), (103, 39012), (114, 39078), (125, 39114), (130, 39153),

Gene: OldBen_49 Start: 37029, Stop: 37412, Start Num: 60
Candidate Starts for OldBen_49:
(Start: 60 @37029 has 34 MA's), (62, 37038), (Start: 78 @37101 has 1 MA's), (81, 37125), (103, 37242), (114, 37308), (125, 37344), (130, 37383),

Gene: OlympiaSaint_51 Start: 36873, Stop: 37310, Start Num: 45
Candidate Starts for OlympiaSaint_51:

(Start: 45 @36873 has 1 MA's), (54, 36906), (63, 36933), (70, 36957), (103, 37116), (127, 37245), (128, 37248), (130, 37278), (134, 37299),

Gene: Ovechkin_75 Start: 46310, Stop: 46654, Start Num: 82
Candidate Starts for Ovechkin_75:
(Start: 82 @46310 has 3 MA's), (102, 46403), (127, 46541), (128, 46544), (130, 46574),

Gene: OwlsT2W_50 Start: 36873, Stop: 37304, Start Num: 50
Candidate Starts for OwlsT2W_50:
(Start: 50 @36873 has 11 MA's), (Start: 60 @36906 has 34 MA's), (66, 36933), (73, 36957), (101, 37095), (103, 37116), (107, 37161), (130, 37284),

Gene: PHappiness_47 Start: 35287, Stop: 35670, Start Num: 60
Candidate Starts for PHappiness_47:
(Start: 60 @35287 has 34 MA's), (62, 35296), (Start: 78 @35359 has 1 MA's), (81, 35383), (103, 35500), (114, 35566), (125, 35602), (130, 35641),

Gene: PMC_45 Start: 36085, Stop: 36468, Start Num: 60
Candidate Starts for PMC_45:
(Start: 60 @36085 has 34 MA's), (62, 36094), (Start: 78 @36157 has 1 MA's), (81, 36181), (103, 36298), (114, 36364), (125, 36400), (130, 36439),

Gene: Pacc40_46 Start: 35361, Stop: 35744, Start Num: 60
Candidate Starts for Pacc40_46:
(Start: 60 @35361 has 34 MA's), (62, 35370), (Start: 78 @35433 has 1 MA's), (81, 35457), (103, 35574), (114, 35640), (125, 35676), (130, 35715),

Gene: Pat3_41 Start: 33929, Stop: 33462, Start Num: 57
Candidate Starts for Pat3_41:
(Start: 53 @33941 has 8 MA's), (Start: 57 @33929 has 1 MA's), (83, 33803), (85, 33794), (89, 33779), (94, 33755), (100, 33710), (105, 33644), (119, 33545), (131, 33473),

Gene: Phanphagia_48 Start: 36801, Stop: 37235, Start Num: 46
Candidate Starts for Phanphagia_48:
(Start: 46 @36801 has 6 MA's), (Start: 47 @36804 has 1 MA's), (54, 36831), (63, 36858), (70, 36882), (103, 37041), (127, 37170), (128, 37173), (130, 37203), (134, 37224),

Gene: Phasih_48 Start: 36631, Stop: 37014, Start Num: 60
Candidate Starts for Phasih_48:
(Start: 60 @36631 has 34 MA's), (62, 36640), (Start: 78 @36703 has 1 MA's), (81, 36727), (103, 36844), (114, 36910), (125, 36946), (130, 36985),

Gene: PhlipPhlop_50 Start: 37891, Stop: 38274, Start Num: 60
Candidate Starts for PhlipPhlop_50:
(Start: 60 @37891 has 34 MA's), (62, 37900), (Start: 78 @37963 has 1 MA's), (81, 37987), (103, 38104), (114, 38170), (125, 38206), (130, 38245),

Gene: Phoebus_77 Start: 52618, Stop: 52250, Start Num: 76
Candidate Starts for Phoebus_77:
(Start: 76 @52618 has 60 MA's), (89, 52570), (98, 52510), (103, 52477), (107, 52432), (108, 52426), (128, 52327), (130, 52288), (133, 52264),

Gene: Plumbus_53 Start: 37073, Stop: 37519, Start Num: 50

Candidate Starts for Plumbus_53:
(Start: 50 @37073 has 11 MA's), (Start: 60 @37106 has 34 MA's), (66, 37133), (73, 37157), (103, 37316), (118, 37415), (130, 37493),

Gene: Poenanya_50 Start: 37614, Stop: 37997, Start Num: 60
Candidate Starts for Poenanya_50:
(Start: 60 @37614 has 34 MA's), (62, 37623), (Start: 78 @37686 has 1 MA's), (81, 37710), (103, 37827), (114, 37893), (125, 37929), (130, 37968),

Gene: Polka14_48 Start: 35964, Stop: 36347, Start Num: 60
Candidate Starts for Polka14_48:
(Start: 60 @35964 has 34 MA's), (62, 35973), (Start: 78 @36036 has 1 MA's), (81, 36060), (103, 36177), (114, 36243), (125, 36279), (130, 36318),

Gene: Pollywog_51 Start: 37317, Stop: 37757, Start Num: 50
Candidate Starts for Pollywog_51:
(Start: 50 @37317 has 11 MA's), (Start: 60 @37350 has 34 MA's), (66, 37377), (73, 37401), (101, 37539), (103, 37560), (107, 37605), (130, 37728), (132, 37746),

Gene: Polo2Bam_91 Start: 47700, Stop: 48044, Start Num: 76
Candidate Starts for Polo2Bam_91:
(Start: 76 @47700 has 60 MA's), (89, 47748), (98, 47808), (130, 48006), (133, 48030),

Gene: Porcelain_74 Start: 47744, Stop: 47376, Start Num: 76
Candidate Starts for Porcelain_74:
(Start: 76 @47744 has 60 MA's), (89, 47696), (98, 47636), (103, 47603), (107, 47558), (108, 47552), (128, 47453), (130, 47414), (133, 47390),

Gene: Quico_60 Start: 39037, Stop: 39525, Start Num: 33
Candidate Starts for Quico_60:
(Start: 33 @39037 has 2 MA's), (36, 39046), (Start: 57 @39121 has 1 MA's), (61, 39130), (68, 39166), (81, 39238), (87, 39259), (103, 39355), (114, 39421), (125, 39457), (130, 39496),

Gene: Radiance_51 Start: 37201, Stop: 37584, Start Num: 60
Candidate Starts for Radiance_51:
(Start: 60 @37201 has 34 MA's), (62, 37210), (Start: 78 @37273 has 1 MA's), (81, 37297), (103, 37414), (114, 37480), (125, 37516), (130, 37555),

Gene: Ramsey_52 Start: 37825, Stop: 38238, Start Num: 50
Candidate Starts for Ramsey_52:
(Start: 50 @37825 has 11 MA's), (Start: 60 @37858 has 34 MA's), (66, 37885), (73, 37909), (103, 38068), (114, 38134), (125, 38170), (130, 38209),

Gene: Rearden_67 Start: 46500, Stop: 46132, Start Num: 76
Candidate Starts for Rearden_67:
(Start: 76 @46500 has 60 MA's), (89, 46452), (98, 46392), (103, 46359), (107, 46314), (108, 46308), (128, 46209), (130, 46170), (133, 46146),

Gene: Redno2_71 Start: 48232, Stop: 47864, Start Num: 76
Candidate Starts for Redno2_71:
(Start: 76 @48232 has 60 MA's), (89, 48184), (98, 48124), (103, 48091), (107, 48046), (108, 48040), (128, 47941), (130, 47902), (133, 47878),

Gene: Renaud18_56 Start: 37524, Stop: 38036, Start Num: 28
Candidate Starts for Renaud18_56:
(5, 37356), (9, 37389), (12, 37404), (15, 37434), (16, 37437), (19, 37464), (22, 37473), (Start: 28 @37524 has 5 MA's), (40, 37560), (Start: 58 @37617 has 1 MA's), (65, 37650), (71, 37671), (98, 37812), (103, 37845), (130, 38010),

Gene: RitaG_47 Start: 35632, Stop: 36015, Start Num: 60
Candidate Starts for RitaG_47:
(Start: 60 @35632 has 34 MA's), (62, 35641), (Start: 78 @35704 has 1 MA's), (81, 35728), (103, 35845), (114, 35911), (125, 35947), (130, 35986),

Gene: Rockne_49 Start: 36085, Stop: 36468, Start Num: 60
Candidate Starts for Rockne_49:
(Start: 60 @36085 has 34 MA's), (62, 36094), (Start: 78 @36157 has 1 MA's), (81, 36181), (103, 36298), (114, 36364), (125, 36400), (130, 36439),

Gene: RockyHorror_51 Start: 36489, Stop: 36872, Start Num: 60
Candidate Starts for RockyHorror_51:
(Start: 60 @36489 has 34 MA's), (62, 36498), (Start: 78 @36561 has 1 MA's), (81, 36585), (103, 36702), (114, 36768), (125, 36804), (130, 36843),

Gene: Sandalphon_53 Start: 37808, Stop: 38191, Start Num: 60
Candidate Starts for Sandalphon_53:
(Start: 60 @37808 has 34 MA's), (62, 37817), (Start: 78 @37880 has 1 MA's), (81, 37904), (103, 38021), (114, 38087), (125, 38123), (130, 38162),

Gene: Sarma624_81 Start: 45898, Stop: 46242, Start Num: 76
Candidate Starts for Sarma624_81:
(Start: 76 @45898 has 60 MA's), (89, 45946), (98, 46006), (130, 46204), (133, 46228),

Gene: Schatzie_69 Start: 50226, Stop: 49858, Start Num: 76
Candidate Starts for Schatzie_69:
(Start: 76 @50226 has 60 MA's), (89, 50178), (98, 50118), (103, 50085), (107, 50040), (108, 50034), (128, 49935), (130, 49896), (133, 49872),

Gene: ScoobyDoobyDoo_3 Start: 606, Stop: 1007, Start Num: 53
Candidate Starts for ScoobyDoobyDoo_3:
(Start: 53 @606 has 8 MA's), (74, 681), (79, 696), (88, 723), (91, 729), (95, 774), (98, 786), (104, 840), (112, 897), (129, 963),

Gene: Scottish_50 Start: 36644, Stop: 37027, Start Num: 60
Candidate Starts for Scottish_50:
(Start: 60 @36644 has 34 MA's), (62, 36653), (Start: 78 @36716 has 1 MA's), (81, 36740), (103, 36857), (114, 36923), (125, 36959), (130, 36998),

Gene: Seabastian_56 Start: 38900, Stop: 39235, Start Num: 72
Candidate Starts for Seabastian_56:
(Start: 72 @38900 has 7 MA's), (Start: 78 @38933 has 1 MA's), (83, 38960), (86, 38972), (89, 38984), (103, 39068), (114, 39134), (125, 39170), (130, 39209),

Gene: Shaboozey_68 Start: 45709, Stop: 45341, Start Num: 76
Candidate Starts for Shaboozey_68:

(Start: 76 @45709 has 60 MA's), (89, 45661), (98, 45601), (103, 45568), (107, 45523), (108, 45517), (128, 45418), (130, 45379), (133, 45355),

Gene: Shauna1_48 Start: 36782, Stop: 37216, Start Num: 46
Candidate Starts for Shauna1_48:
(Start: 46 @36782 has 6 MA's), (Start: 47 @36785 has 1 MA's), (54, 36812), (63, 36839), (70, 36863), (103, 37022), (127, 37151), (128, 37154), (130, 37184), (134, 37205),

Gene: ShroomBoi_53 Start: 37239, Stop: 37649, Start Num: 51
Candidate Starts for ShroomBoi_53:
(Start: 51 @37239 has 1 MA's), (52, 37242), (Start: 60 @37269 has 34 MA's), (66, 37296), (73, 37320), (103, 37479), (114, 37545), (125, 37581), (130, 37620),

Gene: SirDuracell_41 Start: 33680, Stop: 33204, Start Num: 53
Candidate Starts for SirDuracell_41:
(Start: 53 @33680 has 8 MA's), (79, 33563), (83, 33545), (89, 33521), (94, 33497), (100, 33452), (105, 33386), (119, 33287), (131, 33215),

Gene: Soul22_83 Start: 47464, Stop: 47808, Start Num: 76
Candidate Starts for Soul22_83:
(Start: 76 @47464 has 60 MA's), (89, 47512), (98, 47572), (130, 47770), (133, 47794),

Gene: Spartacus_88 Start: 51839, Stop: 52264, Start Num: 76
Candidate Starts for Spartacus_88:
(Start: 76 @51839 has 60 MA's), (106, 52034), (110, 52076), (117, 52136), (119, 52145), (128, 52181), (130, 52226), (133, 52250),

Gene: Spikelee_57 Start: 38384, Stop: 38767, Start Num: 60
Candidate Starts for Spikelee_57:
(Start: 60 @38384 has 34 MA's), (62, 38393), (Start: 78 @38456 has 1 MA's), (81, 38480), (103, 38597), (114, 38663), (125, 38699), (130, 38738),

Gene: Spoonbill_49 Start: 35586, Stop: 35969, Start Num: 60
Candidate Starts for Spoonbill_49:
(Start: 60 @35586 has 34 MA's), (62, 35595), (Start: 78 @35658 has 1 MA's), (81, 35682), (103, 35799), (114, 35865), (125, 35901), (130, 35940),

Gene: Sprinklers_17 Start: 5187, Stop: 5555, Start Num: 76
Candidate Starts for Sprinklers_17:
(Start: 76 @5187 has 60 MA's), (89, 5235), (98, 5295), (103, 5328), (107, 5373), (108, 5379), (128, 5478), (130, 5517), (133, 5541),

Gene: Squint_75 Start: 47863, Stop: 47495, Start Num: 76
Candidate Starts for Squint_75:
(Start: 76 @47863 has 60 MA's), (89, 47815), (98, 47755), (103, 47722), (107, 47677), (108, 47671), (128, 47572), (130, 47533), (133, 47509),

Gene: Squirty_54 Start: 37873, Stop: 38295, Start Num: 58
Candidate Starts for Squirty_54:
(31, 37786), (38, 37807), (Start: 58 @37873 has 1 MA's), (71, 37927), (103, 38101), (127, 38230), (128, 38233), (130, 38263), (134, 38284),

Gene: Stap_50 Start: 36387, Stop: 36770, Start Num: 60

Candidate Starts for Stap_50:
(Start: 60 @36387 has 34 MA's), (62, 36396), (Start: 78 @36459 has 1 MA's), (81, 36483), (103, 36600), (114, 36666), (125, 36702), (130, 36741),

Gene: SuperGrey_53 Start: 38208, Stop: 38642, Start Num: 46
Candidate Starts for SuperGrey_53:
(Start: 46 @38208 has 6 MA's), (Start: 47 @38211 has 1 MA's), (54, 38238), (63, 38265), (70, 38289), (103, 38448), (127, 38577), (128, 38580), (130, 38610), (134, 38631),

Gene: Superphikiman_72 Start: 46954, Stop: 46586, Start Num: 76
Candidate Starts for Superphikiman_72:
(Start: 76 @46954 has 60 MA's), (89, 46906), (98, 46846), (103, 46813), (107, 46768), (108, 46762), (128, 46663), (130, 46624), (133, 46600),

Gene: Taj_54 Start: 37445, Stop: 37957, Start Num: 28
Candidate Starts for Taj_54:
(5, 37277), (9, 37310), (12, 37325), (15, 37355), (16, 37358), (19, 37385), (22, 37394), (Start: 28 @37445 has 5 MA's), (40, 37481), (Start: 58 @37538 has 1 MA's), (65, 37571), (71, 37592), (98, 37733), (103, 37766), (130, 37931),

Gene: Tchotchke_77 Start: 47983, Stop: 48327, Start Num: 76
Candidate Starts for Tchotchke_77:
(Start: 76 @47983 has 60 MA's), (89, 48031), (98, 48091), (126, 48253), (130, 48289), (133, 48313),

Gene: ThetaBob_55 Start: 37062, Stop: 37427, Start Num: 50
Candidate Starts for ThetaBob_55:
(Start: 50 @37062 has 11 MA's), (Start: 60 @37095 has 34 MA's), (66, 37122), (73, 37146), (93, 37230), (97, 37269), (99, 37278), (111, 37371), (120, 37398), (122, 37401),

Gene: ThreeRngTarjay_72 Start: 51510, Stop: 51142, Start Num: 76
Candidate Starts for ThreeRngTarjay_72:
(Start: 76 @51510 has 60 MA's), (89, 51462), (98, 51402), (103, 51369), (107, 51324), (108, 51318), (128, 51219), (130, 51180), (133, 51156),

Gene: Topiatin_56 Start: 38155, Stop: 38643, Start Num: 33
Candidate Starts for Topiatin_56:
(Start: 33 @38155 has 2 MA's), (36, 38164), (Start: 57 @38239 has 1 MA's), (61, 38248), (68, 38284), (81, 38356), (87, 38377), (103, 38473), (114, 38539), (125, 38575), (130, 38614),

Gene: Topiatin_86 Start: 49943, Stop: 50392, Start Num: 53
Candidate Starts for Topiatin_86:
(17, 49784), (21, 49814), (Start: 53 @49943 has 8 MA's), (Start: 57 @49955 has 1 MA's), (79, 50063), (83, 50081), (89, 50105), (94, 50129), (95, 50159), (98, 50171), (104, 50225), (112, 50282), (129, 50348),

Gene: Traaww1_39 Start: 34655, Stop: 34287, Start Num: 76
Candidate Starts for Traaww1_39:
(Start: 76 @34655 has 60 MA's), (89, 34607), (98, 34547), (103, 34514), (107, 34469), (108, 34463), (128, 34364), (130, 34325), (133, 34301),

Gene: Tweety_50 Start: 37155, Stop: 37592, Start Num: 50
Candidate Starts for Tweety_50:

(Start: 50 @37155 has 11 MA's), (Start: 60 @37188 has 34 MA's), (66, 37215), (73, 37239), (101, 37377), (103, 37398), (109, 37458),

Gene: Velveteen_76 Start: 45898, Stop: 46242, Start Num: 76
Candidate Starts for Velveteen_76:
(Start: 76 @45898 has 60 MA's), (89, 45946), (98, 46006), (130, 46204), (133, 46228),

Gene: Vivum_55 Start: 37408, Stop: 37791, Start Num: 60
Candidate Starts for Vivum_55:
(Start: 60 @37408 has 34 MA's), (62, 37417), (Start: 78 @37480 has 1 MA's), (81, 37504), (103, 37621), (114, 37687), (125, 37723), (130, 37762),

Gene: Wee_53 Start: 37717, Stop: 38229, Start Num: 28
Candidate Starts for Wee_53:
(5, 37549), (9, 37582), (12, 37597), (15, 37627), (16, 37630), (19, 37657), (22, 37666), (Start: 28 @37717 has 5 MA's), (40, 37753), (Start: 58 @37810 has 1 MA's), (65, 37843), (71, 37864), (98, 38005), (103, 38038), (130, 38203),

Gene: WillSterrel_81 Start: 49641, Stop: 50066, Start Num: 76
Candidate Starts for WillSterrel_81:
(Start: 76 @49641 has 60 MA's), (106, 49836), (110, 49878), (117, 49938), (119, 49947), (128, 49983), (130, 50028), (133, 50052),

Gene: Yeet_70 Start: 49727, Stop: 49359, Start Num: 76
Candidate Starts for Yeet_70:
(Start: 76 @49727 has 60 MA's), (89, 49679), (98, 49619), (103, 49586), (107, 49541), (108, 49535), (128, 49436), (130, 49397),

Gene: Zelink_72 Start: 51822, Stop: 51454, Start Num: 76
Candidate Starts for Zelink_72:
(Start: 76 @51822 has 60 MA's), (89, 51774), (98, 51714), (103, 51681), (107, 51636), (108, 51630), (128, 51531), (130, 51492), (133, 51468),

Gene: Zerg_50 Start: 36598, Stop: 36981, Start Num: 60
Candidate Starts for Zerg_50:
(Start: 60 @36598 has 34 MA's), (62, 36607), (Start: 78 @36670 has 1 MA's), (81, 36694), (103, 36811), (114, 36877), (125, 36913), (130, 36952),