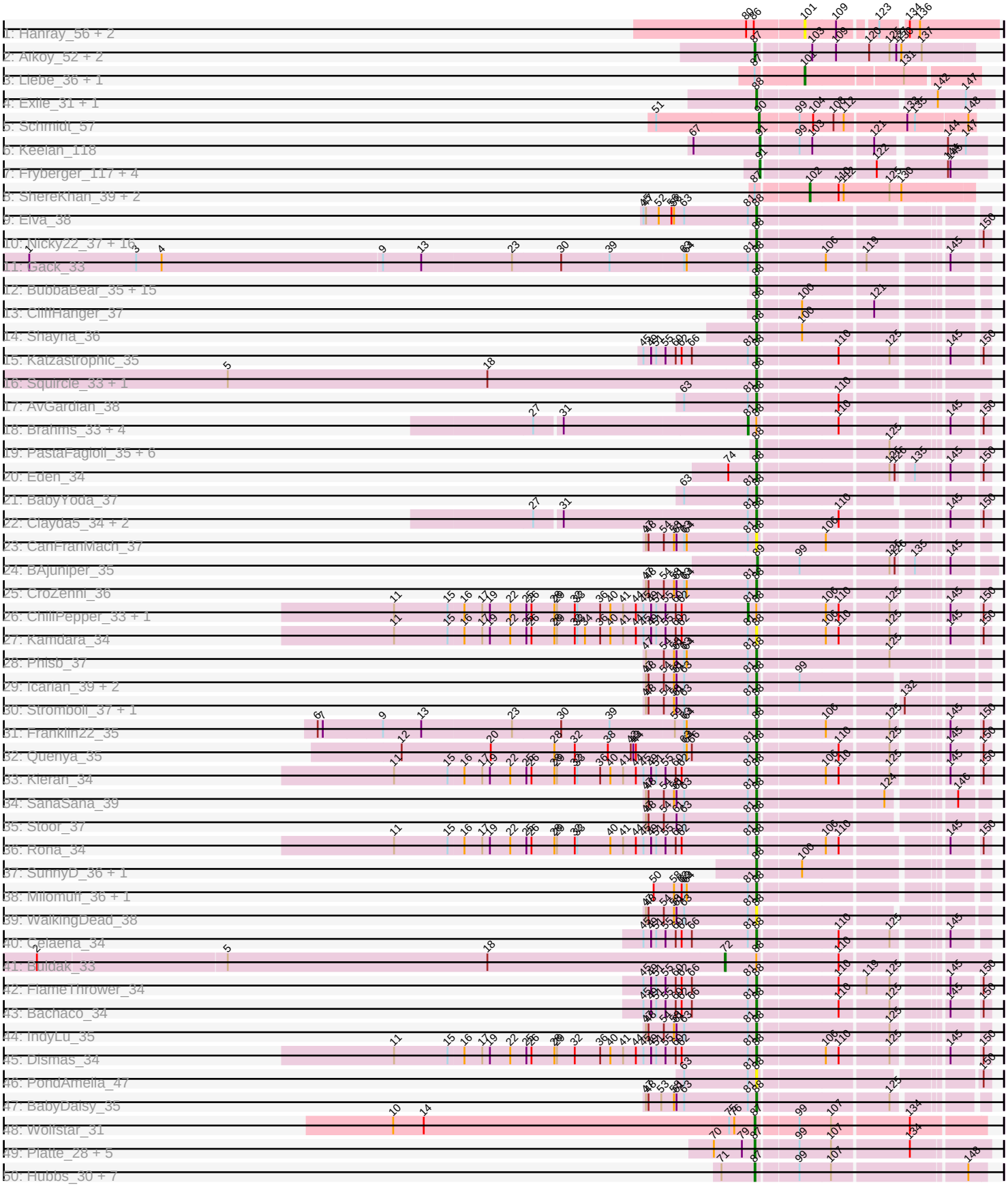
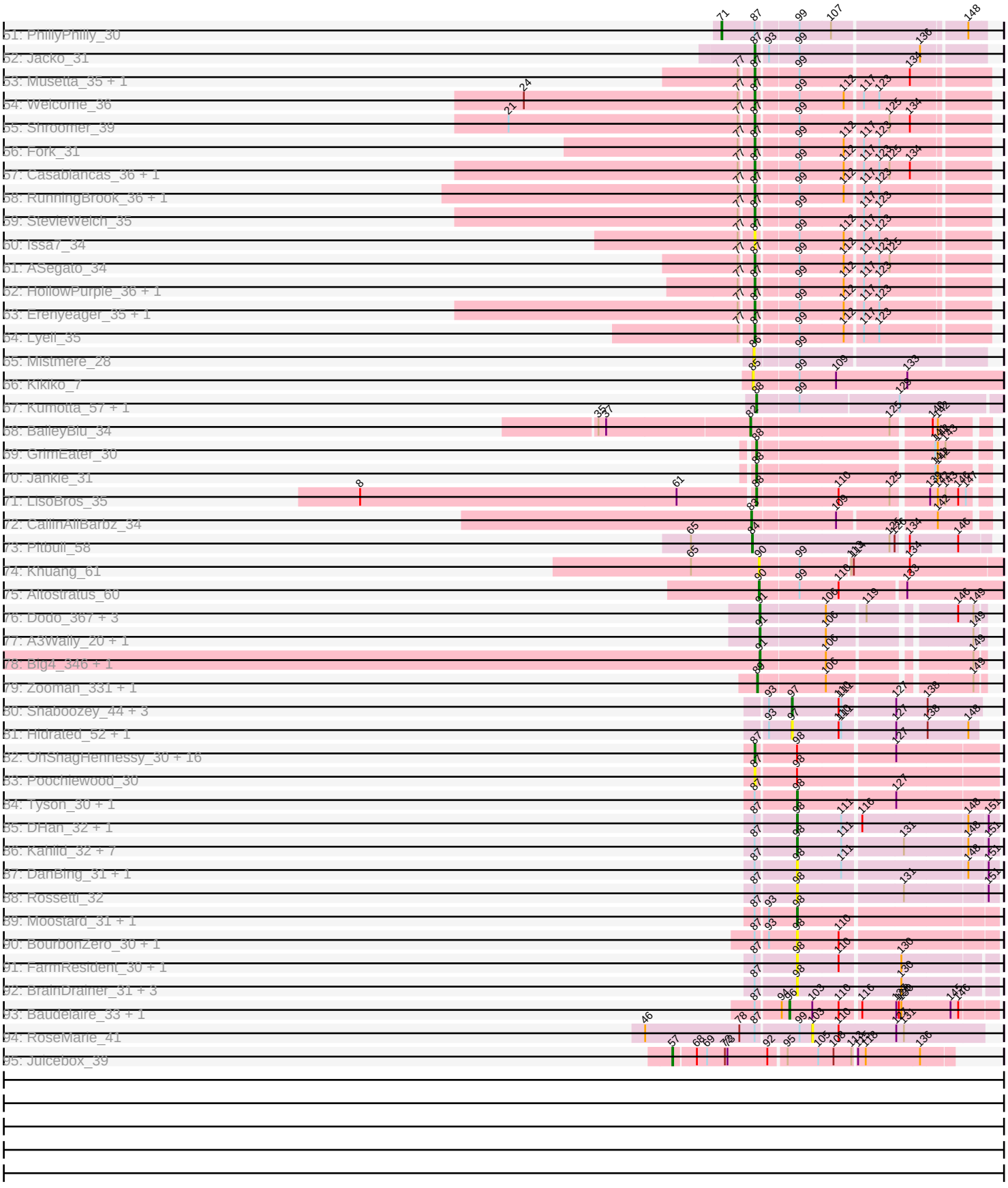
Pham 311227


1: Hanray_56 + 2
2: Alkoy_52 + 2
3: Liebe_36 + 1
4: Exile_31 + 1
5: Schmidt_57
6: Keelan_118
7: Fryberger_117 + 4
8: ShereKhan_39 + 2
9: Elva_38
10: Nicky22_37 + 16
11: Back_33
12: BubbaBear_35 + 15
13: CliffHanger_37
14: Shayna_36
15: Katzastrophic_35
16: Squircle_33 + 1
17: AvGardian_38
18: Brahms_33 + 4
19: PastaFagioli_35 + 6
20: Eden_34
21: BabyYoda_37
22: Clayda5_34 + 2
23: CamFranMach_37
24: BAjuniper_35
25: CroZenni_36
26: ChiliPepper_33 + 1
27: Kamdara_34
28: Phisb_37
29: Icarian_39 + 2
30: Stromboli_37 + 1
31: Franklin22_35
32: Quenya_35
33: Kieran_34
34: SanaSana_39
35: Stoor_37
36: Rona_34
37: SunnyD_36 + 1
38: Milomuff_36 + 1
39: WalkingDead_38
40: Celaena_34
41: Budak_33
42: FlameThrower_34
43: Bachaco_34
44: IndyLu_35
45: Dismas_34
46: PondAmelia_47
47: BabyDaisy_35
48: Wolfstar_31
49: Platte_28 + 5
50: Hubbs_30 + 7

Pham 311227


51: PhillyPhilly_30
52: Jacko_31
53: Musetta_35 + 1
54: Welcome_36
55: Shroomer_39
56: Fork_31
57: Casablancas_36 + 1
58: RunningBrook_36 + 1
59: StevieWelch_35
60: Issa7_34
61: ASegato_34
62: HollowPurple_36 + 1
63: Erenyeager_35 + 1
64: Lyell_35
65: Mistmere_28
66: Kikiko_7
67: Kumotta_57 + 1
68: BalleyBlu_34
69: GrimEater_30
70: Jankie_31
71: LisoBros_35
72: CallinAllBarbz_34
73: Pitbull_58
74: Khuang_61
75: Altostratus_60
76: Dodo_367 + 3
77: A3Wally_20 + 1
78: Big4_346 + 1
79: Zooman_331 + 1
80: Shaboozey_44 + 3
81: Hidrated_52 + 1
82: OhShagHennessy_30 + 16
83: Poochiewood_30
84: Tyson_30 + 1
85: DHan_32 + 1
86: Kahlid_32 + 7
87: DanBing_31 + 1
88: Rossetti_32
89: Moostard_31 + 1
90: BourbonZero_30 + 1
91: FarmResident_30 + 1
92: BrainDrainer_31 + 3
93: Baudelaire_33 + 1
94: RoseMarie_41
95: Juicebox_39

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 311227 Report

This analysis was run 06/27/26 on database version 652.

WARNING: Pham size does not match number of genes in report. Either unphamerated genes have been added (by you) or starterator has removed genes due to invalid start codon.

Pham number 311227 has 218 members, 45 are drafts.

Phages represented in each track:
• Track 1 : Hanray_56, Holex_57, EdogawaKiddo_56
• Track 2 : Aikoy_52, Onyinye_53, Leopard_52
• Track 3 : Liebe_36, IUFootball_36
• Track 4 : Exile_31, Soondubu_31
• Track 5 : Schmidt_57
• Track 6 : Keelan_118
• Track 7 : Fryberger_117, Ronaldo_118, Ziko_119, Guey18_121, Volt_121
• Track 8 : ShereKhan_39, Phaja_37, IHOP_37
• Track 9 : Elva_38
• Track 10 : Nicky22_37, Kenzers_36, SarBear_36, Jabb_37, Eula_37, Lynlen_36, Albedo_36, AylexOG_38, Lilo27_37, CupcakePrincess_37, Jovita_37, MsUbiquitous_37, Pecas_36, QMacho_38, Slay_37, SirBeanington_36, Swervy_37
• Track 11 : Gack_33
• Track 12 : BubbaBear_35, Bengal_37, AnnaLie_37, Albright_34, Abigail_35, SansAfet_37, Finalfrontier_36, BelmontSKP_37, Arroyo_37, Doobus_35, Softsoap_36, Johnathan_35, Burritobowl_36, DickRichards_35, LimaBean_35, Avocadoman_35
• Track 13 : CliffHanger_37
• Track 14 : Shayna_36
• Track 15 : Katzastrophic_35
• Track 16 : Squircle_33, Olliecat_33
• Track 17 : AvGardian_38
• Track 18 : Brahms_33, Rollins_33, Coltrane_33, Bernstein_33, Armstrong_33
• Track 19 : PastaFagioli_35, Didgeridoo_38, Cashington_34, TukTuk_37, Lahqtemish_35, PhigPhack_37, Kate33_36
• Track 20 : Eden_34
• Track 21 : BabyYoda_37
• Track 22 : Clayda5_34, Skylord_33, Vitas_33
• Track 23 : CanFranMach_37
• Track 24 : BAjuniper_35
• Track 25 : CroZenni_36
• Track 26 : ChiliPepper_33, Sharkboy_35
• Track 27 : Kamdara_34

• Track 28 : Phisb_37
• Track 29 : Icarian_39, Akino08_37, Loviatar_37
• Track 30 : Stromboli_37, DirtyBubble_36
• Track 31 : Franklin22_35
• Track 32 : Quenya_35
• Track 33 : Kieran_34
• Track 34 : SanaSana_39
• Track 35 : Stoor_37
• Track 36 : Rona_34
• Track 37 : SunnyD_36, Teagster_37
• Track 38 : Milomuff_36, Solea_37
• Track 39 : WalkingDead_38
• Track 40 : Celaena_34
• Track 41 : Buldak_33
• Track 42 : FlameThrower_34
• Track 43 : Bachaco_34
• Track 44 : IndyLu_35
• Track 45 : Dismas_34
• Track 46 : PondAmelia_47
• Track 47 : BabyDaisy_35
• Track 48 : Wolfstar_31
• Track 49 : Platte_28, Hortus1_28, Alleb_29, Tandem_28, OlinDD_28, Pioneer3_28
• Track 50 : Hubbs_30, Saradis_31, Roman_30, DejaVu_31, Lupine_29, Pavlo_29, Uterion_32, Solimine_31
• Track 51 : PhillyPhilly_30
• Track 52 : Jacko_31
• Track 53 : Musetta_35, Yuma_34
• Track 54 : Welcome_36
• Track 55 : Shroomer_39
• Track 56 : Fork_31
• Track 57 : Casablancas_36, Deschain_35
• Track 58 : RunningBrook_36, DustyDino_38
• Track 59 : StevieWelch_35
• Track 60 : Issa7_34
• Track 61 : ASegato_34
• Track 62 : HollowPurple_36, SteakFry_37
• Track 63 : Erenyeager_35, Necrophoxinus_37
• Track 64 : Lyell_35
• Track 65 : Mistmere_28
• Track 66 : Kikiko_7
• Track 67 : Kumotta_57, MargaretKali_53
• Track 68 : BaileyBlu_34
• Track 69 : GrimEater_30
• Track 70 : Jankie_31
• Track 71 : LisoBros_35
• Track 72 : CallinAllBarbz_34
• Track 73 : Pitbull_58
• Track 74 : Khuang_61
• Track 75 : Altostratus_60
• Track 76 : Dodo_367, PauloDiaboli_20, PauloDiaboli_375, Dodo_21
• Track 77 : A3Wally_20, A3Wally_373
• Track 78 : Big4_346, Big4_20
• Track 79 : Zooman_331, Zooman_18

• Track 80 : Shaboozey_44, Gonephishing_53, Squint_50, BronnyJames_44
• Track 81 : Hidrated_52, Marleymoo_53
• Track 82 : OhShagHennessy_30, Rose5_30, Calm_30, LeBron_30, Halena_30, CicholasNage_30, MAckerman_30, Zaria_30, AvadaKedavra_30, Wamburgrxpress_30, Acquire49_30, UPIE_30, Wyatt2_30, Enceladus_30, JoeDirt_30, Silverleaf_30, Appletree2_30
• Track 83 : Poochiewood_30
• Track 84 : Tyson_30, DirkDirk_30
• Track 85 : DHan_32, Claus_32
• Track 86 : Kahlid_32, Rumpelstiltskin_32, Lewan_32, SoJulia_33, Lynnae_32, Soap141_32, Sarshaun_32, Hafay_32
• Track 87 : DanBing_31, ZhongYanYuan_31
• Track 88 : Rossetti_32
• Track 89 : Moostard_31, Jobypre_31
• Track 90 : BourbonZero_30, KirDoubleO7_29
• Track 91 : FarmResident_30, Quby_30
• Track 92 : BrainDrainer_31, Douzhi_30, Sheng711_30, PYPDinur_30
• Track 93 : Baudelaire_33, Aegeus_33
• Track 94 : RoseMarie_41
• Track 95 : Juicebox_39

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

The start number called the most often in the published annotations is 88, it was called in 78 of the 173 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Abigail_35, Akino08_37, Albedo_36, Albright_34, AnnaLie_37, Arroyo_37, AvGardian_38, Avocadoman_35, AylexOG_38, BabyDaisy_35, BabyYoda_37, Bachaco_34, BelmontSKP_37, Bengal_37, BubbaBear_35, Burritobowl_36, CanFranMach_37, Cashington_34, Celaena_34, Clayda5_34, CliffHanger_37, CroZenni_36, CupcakePrincess_37, DickRichards_35, Didgeridoo_38, DirtyBubble_36, Dismas_34, Doobus_35, Eden_34, Elva_38, Eula_37, Exile_31, Finalfrontier_36, FlameThrower_34, Franklin22_35, Gack_33, GrimEater_30, Icarian_39, IndyLu_35, Jabb_37, Jankie_31, Johnathan_35, Jovita_37, Kamdara_34, Kate33_36, Katzastrophic_35, Kenzers_36, Kieran_34, Kumotta_57, Lahqtemish_35, Lilo27_37, LimaBean_35, LisoBros_35, Loviatar_37, Lynlen_36, MargaretKali_53, Milomuff_36, MsUbiquitous_37, Nicky22_37, Olliecat_33, PastaFagioli_35, Pecas_36, PhigPhack_37, Phisb_37, PondAmelia_47, QMacho_38, Quenya_35, Rona_34, SanaSana_39, SansAfet_37, SarBear_36, Shayna_36, SirBeanington_36, Skylord_33, Slay_37, Softsoap_36, Solea_37, Soondubu_31, Squircle_33, Stoor_37, Stromboli_37, SunnyD_36, Swervy_37, Teagster_37, TukTuk_37, Vitas_33, WalkingDead_38,

Genes that have the "Most Annotated" start but do not call it:
• Armstrong_33, Bernstein_33, Brahms_33, Buldak_33, ChiliPepper_33, Coltrane_33, Rollins_33, Sharkboy_35,

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

• A3Wally_20, A3Wally_373, ASegato_34, Acquire49_30, Aegeus_33, Aikoy_52, Alleb_29, Altostratus_60, Appletree2_30, AvadaKedavra_30, BAjuniper_35, BaileyBlu_34, Baudelaire_33, Big4_20, Big4_346, BourbonZero_30, BrainDrainer_31, BronnyJames_44, CallinAllBarbz_34, Calm_30, Casablancas_36, CicholasNage_30, Claus_32, DHan_32, DanBing_31, DejaVu_31, Deschain_35, DirkDirk_30, Dodo_21, Dodo_367, Douzhi_30, DustyDino_38, EdogawaKiddo_56, Enceladus_30, Erenyeager_35, FarmResident_30, Fork_31, Fryberger_117, Gonephishing_53, Guey18_121, Hafay_32, Halena_30, Hanray_56, Hidrated_52, Holex_57, HollowPurple_36, Hortus1_28, Hubbs_30, IHOP_37, IUFootball_36, Issa7_34, Jacko_31, Jobypre_31, JoeDirt_30, Juicebox_39, Kahlid_32, Keelan_118, Khuang_61, Kikiko_7, KirDoubleO7_29, LeBron_30, Leopard_52, Lewan_32, Liebe_36, Lupine_29, Lyell_35, Lynnae_32, MAckerman_30, Marleymoo_53, Mistmere_28, Moostard_31, Musetta_35, Necrophoxinus_37, OhShagHennessy_30, OlinDD_28, Onyinye_53, PYPDinur_30, PauloDiaboli_20, PauloDiaboli_375, Pavlo_29, Phaja_37, PhillyPhilly_30, Pioneer3_28, Pitbull_58, Platte_28, Poochiewood_30, Quby_30, Roman_30, Ronaldo_118, Rose5_30, RoseMarie_41, Rossetti_32, Rumpelstiltskin_32, RunningBrook_36, Saradis_31, Sarshaun_32, Schmidt_57, Shaboozey_44, Sheng711_30, ShereKhan_39, Shroomer_39, Silverleaf_30, SoJulia_33, Soap141_32, Solimine_31, Squint_50, SteakFry_37, StevieWelch_35, Tandem_28, Tyson_30, UPIE_30, Uterion_32, Volt_121, Wamburgrxpress_30, Welcome_36, Wolfstar_31, Wyatt2_30, Yuma_34, Zaria_30, ZhongYanYuan_31, Ziko_119, Zooman_18, Zooman_331,

Summary by start number:

Start 57:
• Found in 1 of 218 (0.5%) of genes in pham
• Manual Annotations of this start: 1 of 173
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Juicebox_39 (singleton),

Start 71:
• Found in 9 of 218 (4.1%) of genes in pham
• Manual Annotations of this start: 1 of 173
• Called 11.1% of time when present
• Phage (with cluster) where this start called: PhillyPhilly_30 (ED1),

Start 72:
• Found in 2 of 218 (0.9%) of genes in pham
• Manual Annotations of this start: 1 of 173
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Buldak_33 (EB),

Start 81:
• Found in 39 of 218 (17.9%) of genes in pham
• Manual Annotations of this start: 7 of 173
• Called 17.9% of time when present
• Phage (with cluster) where this start called: Armstrong_33 (EB), Bernstein_33 (EB), Brahms_33 (EB), ChiliPepper_33 (EB), Coltrane_33 (EB), Rollins_33 (EB), Sharkboy_35 (EB),

Start 82:
• Found in 1 of 218 (0.5%) of genes in pham

• Manual Annotations of this start: 1 of 173
• Called 100.0% of time when present
• Phage (with cluster) where this start called: BaileyBlu_34 (FP),

Start 83:
• Found in 1 of 218 (0.5%) of genes in pham
• Manual Annotations of this start: 1 of 173
• Called 100.0% of time when present
• Phage (with cluster) where this start called: CallinAllBarbz_34 (FP),

Start 84:
• Found in 1 of 218 (0.5%) of genes in pham
• Manual Annotations of this start: 1 of 173
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Pitbull_58 (FQ1),

Start 85:
• Found in 1 of 218 (0.5%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Kikiko_7 (EM2),

Start 86:
• Found in 4 of 218 (1.8%) of genes in pham
• No Manual Annotations of this start.
• Called 25.0% of time when present
• Phage (with cluster) where this start called: Mistmere_28 (ED3),

Start 87:
• Found in 88 of 218 (40.4%) of genes in pham
• Manual Annotations of this start: 48 of 173
• Called 61.4% of time when present
• Phage (with cluster) where this start called: ASegato_34 (ED2), Acquire49_30 (L1), Aikoy_52 (AE), Alleb_29 (ED1), Appletree2_30 (L1), AvadaKedavra_30 (L1), Calm_30 (L1), Casablancas_36 (ED2), CicholasNage_30 (L1), DejaVu_31 (ED1), Deschain_35 (ED2), DustyDino_38 (ED2), Enceladus_30 (L1), Erenyeager_35 (ED2), Fork_31 (ED2), Halena_30 (L1), HollowPurple_36 (ED2), Hortus1_28 (ED1), Hubbs_30 (ED1), Issa7_34 (ED2), Jacko_31 (ED1), JoeDirt_30 (L1), LeBron_30 (L1), Leopard_52 (AE), Lupine_29 (ED1), Lyell_35 (ED2), MAckerman_30 (L1), Musetta_35 (ED2), Necrophoxinus_37 (ED2), OhShagHennessy_30 (L1), OlinDD_28 (ED1), Onyinye_53 (AE), Pavlo_29 (ED1), Pioneer3_28 (ED1), Platte_28 (ED1), Poochiewood_30 (L1), Roman_30 (ED1), Rose5_30 (L1), RunningBrook_36 (ED2), Saradis_31 (ED1), Shroomer_39 (ED2), Silverleaf_30 (L1), Solimine_31 (ED1), SteakFry_37 (ED2), StevieWelch_35 (ED2), Tandem_28 (ED1), UPIE_30 (L1), Uterion_32 (ED1), Wamburgrxpress_30 (L1), Welcome_36 (ED2), Wolfstar_31 (ED), Wyatt2_30 (L1), Yuma_34 (ED2), Zaria_30 (L1),

Start 88:
• Found in 95 of 218 (43.6%) of genes in pham
• Manual Annotations of this start: 78 of 173
• Called 91.6% of time when present
• Phage (with cluster) where this start called: Abigail_35 (EB), Akino08_37 (EB), Albedo_36 (EB), Albright_34 (EB), AnnaLie_37 (EB), Arroyo_37 (EB), AvGardian_38

(EB), Avocadoman_35 (EB), AylexOG_38 (EB), BabyDaisy_35 (EB), BabyYoda_37 (EB), Bachaco_34 (EB), BelmontSKP_37 (EB), Bengal_37 (EB), BubbaBear_35 (EB), Burritobowl_36 (EB), CanFranMach_37 (EB), Cashington_34 (EB), Celaena_34 (EB), Clayda5_34 (EB), CliffHanger_37 (EB), CroZenni_36 (EB), CupcakePrincess_37 (EB), DickRichards_35 (EB), Didgeridoo_38 (EB), DirtyBubble_36 (EB), Dismas_34 (EB), Doobus_35 (EB), Eden_34 (EB), Elva_38 (EB), Eula_37 (EB), Exile_31 (AZ6), Finalfrontier_36 (EB), FlameThrower_34 (EB), Franklin22_35 (EB), Gack_33 (EB), GrimEater_30 (FP), Icarian_39 (EB), IndyLu_35 (EB), Jabb_37 (EB), Jankie_31 (FP), Johnathan_35 (EB), Jovita_37 (EB), Kamdara_34 (EB), Kate33_36 (EB), Katzastrophic_35 (EB), Kenzers_36 (EB), Kieran_34 (EB), Kumotta_57 (FB), Lahqtemish_35 (EB), Lilo27_37 (EB), LimaBean_35 (EB), LisoBros_35 (FP), Loviatar_37 (EB), Lynlen_36 (EB), MargaretKali_53 (FB), Milomuff_36 (EB), MsUbiquitous_37 (EB), Nicky22_37 (EB), Olliecat_33 (EB), PastaFagioli_35 (EB), Pecas_36 (EB), PhigPhack_37 (EB), Phisb_37 (EB), PondAmelia_47 (EB), QMacho_38 (EB), Quenya_35 (EB), Rona_34 (EB), SanaSana_39 (EB), SansAfet_37 (EB), SarBear_36 (EB), Shayna_36 (EB), SirBeanington_36 (EB), Skylord_33 (EB), Slay_37 (EB), Softsoap_36 (EB), Solea_37 (EB), Soondubu_31 (AZ6), Squircle_33 (EB), Stoor_37 (EB), Stromboli_37 (EB), SunnyD_36 (EB), Swervy_37 (EB), Teagster_37 (EB), TukTuk_37 (EB), Vitas_33 (EB), WalkingDead_38 (EB),

Start 89:
• Found in 3 of 218 (1.4%) of genes in pham
• Manual Annotations of this start: 3 of 173
• Called 100.0% of time when present
• Phage (with cluster) where this start called: BAjuniper_35 (EB), Zooman_18 (GD2), Zooman_331 (GD2),

Start 90:
• Found in 3 of 218 (1.4%) of genes in pham
• Manual Annotations of this start: 2 of 173
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Altostratus_60 (FS), Khuang_61 (FS), Schmidt_57 (CU4),

Start 91:
• Found in 14 of 218 (6.4%) of genes in pham
• Manual Annotations of this start: 14 of 173
• Called 100.0% of time when present
• Phage (with cluster) where this start called: A3Wally_20 (GD1), A3Wally_373 (GD1), Big4_20 (GD2), Big4_346 (GD2), Dodo_21 (GD1), Dodo_367 (GD1), Fryberger_117 (DP), Guey18_121 (DP), Keelan_118 (DP), PauloDiaboli_20 (GD1), PauloDiaboli_375 (GD1), Ronaldo_118 (DP), Volt_121 (DP), Ziko_119 (DP),

Start 96:
• Found in 2 of 218 (0.9%) of genes in pham
• Manual Annotations of this start: 2 of 173
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Aegeus_33 (L5), Baudelaire_33 (L5),

Start 97:
• Found in 6 of 218 (2.8%) of genes in pham
• Manual Annotations of this start: 1 of 173
• Called 100.0% of time when present

• Phage (with cluster) where this start called: BronnyJames_44 (J), Gonephishing_53 (J), Hidrated_52 (J), Marleymoo_53 (J), Shaboozey_44 (J), Squint_50 (J),

Start 98:
• Found in 43 of 218 (19.7%) of genes in pham
• Manual Annotations of this start: 8 of 173
• Called 58.1% of time when present
• Phage (with cluster) where this start called: BourbonZero_30 (L3), BrainDrainer_31 (L4), Claus_32 (L2), DHan_32 (L2), DanBing_31 (L2), DirkDirk_30 (L1), Douzhi_30 (L4), FarmResident_30 (L4), Hafay_32 (L2), Jobypre_31 (L3), Kahlid_32 (L2), KirDoubleO7_29 (L3), Lewan_32 (L2), Lynnae_32 (L2), Moostard_31 (L3), PYPDinur_30 (L4), Quby_30 (L4), Rossetti_32 (L2), Rumpelstiltskin_32 (L2), Sarshaun_32 (L2), Sheng711_30 (L4), SoJulia_33 (L2), Soap141_32 (L2), Tyson_30 (L1), ZhongYanYuan_31 (L2),

Start 101:
• Found in 5 of 218 (2.3%) of genes in pham
• Manual Annotations of this start: 1 of 173
• Called 100.0% of time when present
• Phage (with cluster) where this start called: EdogawaKiddo_56 (A9), Hanray_56 (A9), Holex_57 (A9), IUFootball_36 (AZ2), Liebe_36 (AZ2),

Start 102:
• Found in 3 of 218 (1.4%) of genes in pham
• Manual Annotations of this start: 3 of 173
• Called 100.0% of time when present
• Phage (with cluster) where this start called: IHOP_37 (E), Phaja_37 (E), ShereKhan_39 (E),

Start 103:
• Found in 7 of 218 (3.2%) of genes in pham
• No Manual Annotations of this start.
• Called 14.3% of time when present
• Phage (with cluster) where this start called: RoseMarie_41 (M1),

Summary by clusters:

There are 27 clusters represented in this pham: FP, GD1, GD2, FS, singleton, ED2, ED3, FB, ED1, M1, E, DP, CU4, A9, AE, ED, J, EB, L4, L5, L2, L3, L1, EM2, AZ2, FQ1, AZ6,

Info for manual annotations of cluster AE:
•Start number 87 was manually annotated 3 times for cluster AE.

Info for manual annotations of cluster AZ2:
•Start number 101 was manually annotated 1 time for cluster AZ2.

Info for manual annotations of cluster AZ6:
•Start number 88 was manually annotated 1 time for cluster AZ6.

Info for manual annotations of cluster CU4:
•Start number 90 was manually annotated 1 time for cluster CU4.

Info for manual annotations of cluster DP:
•Start number 91 was manually annotated 6 times for cluster DP.

Info for manual annotations of cluster E:
•Start number 102 was manually annotated 3 times for cluster E.

Info for manual annotations of cluster EB:
•Start number 72 was manually annotated 1 time for cluster EB.
•Start number 81 was manually annotated 7 times for cluster EB.
•Start number 88 was manually annotated 72 times for cluster EB.
•Start number 89 was manually annotated 1 time for cluster EB.

Info for manual annotations of cluster ED:
•Start number 87 was manually annotated 1 time for cluster ED.

Info for manual annotations of cluster ED1:
•Start number 71 was manually annotated 1 time for cluster ED1.
•Start number 87 was manually annotated 12 times for cluster ED1.

Info for manual annotations of cluster ED2:
•Start number 87 was manually annotated 15 times for cluster ED2.

Info for manual annotations of cluster FB:
•Start number 88 was manually annotated 2 times for cluster FB.

Info for manual annotations of cluster FP:
•Start number 82 was manually annotated 1 time for cluster FP.
•Start number 83 was manually annotated 1 time for cluster FP.
•Start number 88 was manually annotated 3 times for cluster FP.

Info for manual annotations of cluster FQ1:
•Start number 84 was manually annotated 1 time for cluster FQ1.

Info for manual annotations of cluster FS:
•Start number 90 was manually annotated 1 time for cluster FS.

Info for manual annotations of cluster GD1:
•Start number 91 was manually annotated 6 times for cluster GD1.

Info for manual annotations of cluster GD2:
•Start number 89 was manually annotated 2 times for cluster GD2.
•Start number 91 was manually annotated 2 times for cluster GD2.

Info for manual annotations of cluster J:
•Start number 97 was manually annotated 1 time for cluster J.

Info for manual annotations of cluster L1:
•Start number 87 was manually annotated 17 times for cluster L1.
•Start number 98 was manually annotated 2 times for cluster L1.

Info for manual annotations of cluster L2:
•Start number 98 was manually annotated 4 times for cluster L2.

Info for manual annotations of cluster L3:
•Start number 98 was manually annotated 2 times for cluster L3.

Info for manual annotations of cluster L5:
•Start number 96 was manually annotated 2 times for cluster L5.

Gene Information:

Gene: A3Wally_20 Start: 7196, Stop: 7426, Start Num: 91
Candidate Starts for A3Wally_20:
(Start: 91 @7196 has 14 MA's), (106, 7268), (149, 7415),

Gene: A3Wally_373 Start: 186417, Stop: 186647, Start Num: 91
Candidate Starts for A3Wally_373:
(Start: 91 @186417 has 14 MA's), (106, 186489), (149, 186636),

Gene: ASegato_34 Start: 9990, Stop: 10244, Start Num: 87
Candidate Starts for ASegato_34:
(77, 9975), (Start: 87 @9990 has 48 MA's), (99, 10035), (112, 10086), (117, 10104), (123, 10122), (125, 10134),

Gene: Abigail_35 Start: 24992, Stop: 25222, Start Num: 88
Candidate Starts for Abigail_35:
(Start: 88 @24992 has 78 MA's),

Gene: Acquire49_30 Start: 27690, Stop: 27959, Start Num: 87
Candidate Starts for Acquire49_30:
(Start: 87 @27690 has 48 MA's), (Start: 98 @27735 has 8 MA's), (127, 27843),

Gene: Aegeus_33 Start: 27825, Stop: 28055, Start Num: 96
Candidate Starts for Aegeus_33:
(Start: 87 @27789 has 48 MA's), (94, 27816), (Start: 96 @27825 has 2 MA's), (103, 27852), (110, 27882), (116, 27903), (127, 27942), (128, 27945), (130, 27948), (145, 28005), (146, 28014),

Gene: Aikoy_52 Start: 39434, Stop: 39189, Start Num: 87
Candidate Starts for Aikoy_52:
(Start: 87 @39434 has 48 MA's), (103, 39374), (109, 39347), (120, 39308), (125, 39284), (127, 39278), (130, 39272), (137, 39248),

Gene: Akino08_37 Start: 27416, Stop: 27649, Start Num: 88
Candidate Starts for Akino08_37:
(47, 27287), (48, 27290), (54, 27308), (58, 27320), (61, 27323), (63, 27332), (Start: 81 @27407 has 7 MA's), (Start: 88 @27416 has 78 MA's), (99, 27458),

Gene: Albedo_36 Start: 25530, Stop: 25772, Start Num: 88
Candidate Starts for Albedo_36:

(Start: 88 @25530 has 78 MA's), (150, 25764),

Gene: Albright_34 Start: 24694, Stop: 24924, Start Num: 88
Candidate Starts for Albright_34:
(Start: 88 @24694 has 78 MA's),

Gene: Alleb_29 Start: 9182, Stop: 9436, Start Num: 87
Candidate Starts for Alleb_29:
(70, 9134), (79, 9167), (Start: 87 @9182 has 48 MA's), (99, 9227), (107, 9263), (134, 9350),

Gene: Altostratus_60 Start: 35532, Stop: 35810, Start Num: 90
Candidate Starts for Altostratus_60:
(Start: 90 @35532 has 2 MA's), (99, 35577), (110, 35622), (133, 35697),

Gene: AnnaLie_37 Start: 25815, Stop: 26045, Start Num: 88
Candidate Starts for AnnaLie_37:
(Start: 88 @25815 has 78 MA's),

Gene: Appletree2_30 Start: 27633, Stop: 27902, Start Num: 87
Candidate Starts for Appletree2_30:
(Start: 87 @27633 has 48 MA's), (Start: 98 @27678 has 8 MA's), (127, 27786),

Gene: Armstrong_33 Start: 23408, Stop: 23647, Start Num: 81
Candidate Starts for Armstrong_33:
(27, 23165), (31, 23195), (Start: 81 @23408 has 7 MA's), (Start: 88 @23417 has 78 MA's), (110, 23504), (145, 23609), (150, 23639),

Gene: Arroyo_37 Start: 25853, Stop: 26083, Start Num: 88
Candidate Starts for Arroyo_37:
(Start: 88 @25853 has 78 MA's),

Gene: AvGardian_38 Start: 25976, Stop: 26215, Start Num: 88
Candidate Starts for AvGardian_38:
(63, 25892), (Start: 81 @25967 has 7 MA's), (Start: 88 @25976 has 78 MA's), (110, 26063),

Gene: AvadaKedavra_30 Start: 27700, Stop: 27969, Start Num: 87
Candidate Starts for AvadaKedavra_30:
(Start: 87 @27700 has 48 MA's), (Start: 98 @27745 has 8 MA's), (127, 27853),

Gene: Avocadoman_35 Start: 24931, Stop: 25161, Start Num: 88
Candidate Starts for Avocadoman_35:
(Start: 88 @24931 has 78 MA's),

Gene: AylexOG_38 Start: 25876, Stop: 26118, Start Num: 88
Candidate Starts for AylexOG_38:
(Start: 88 @25876 has 78 MA's), (150, 26110),

Gene: BAjuniper_35 Start: 26652, Stop: 26891, Start Num: 89
Candidate Starts for BAjuniper_35:
(Start: 89 @26652 has 3 MA's), (99, 26694), (125, 26793), (126, 26799), (135, 26814), (145, 26844),

Gene: BabyDaisy_35 Start: 25454, Stop: 25684, Start Num: 88
Candidate Starts for BabyDaisy_35:

(47, 25325), (48, 25328), (53, 25343), (58, 25358), (61, 25361), (63, 25370), (Start: 81 @25445 has 7 MA's), (Start: 88 @25454 has 78 MA's), (125, 25595),

Gene: BabyYoda_37 Start: 26596, Stop: 26829, Start Num: 88
Candidate Starts for BabyYoda_37:
(63, 26512), (Start: 81 @26587 has 7 MA's), (Start: 88 @26596 has 78 MA's),

Gene: Bachaco_34 Start: 26614, Stop: 26844, Start Num: 88
Candidate Starts for Bachaco_34:
(45, 26485), (49, 26494), (51, 26500), (55, 26509), (60, 26521), (62, 26527), (66, 26539), (Start: 81 @26605 has 7 MA's), (Start: 88 @26614 has 78 MA's), (110, 26701), (125, 26755), (145, 26806), (150, 26836),

Gene: BaileyBlu_34 Start: 24331, Stop: 24588, Start Num: 82
Candidate Starts for BaileyBlu_34:
(35, 24157), (37, 24166), (Start: 82 @24331 has 1 MA's), (125, 24487), (140, 24529), (142, 24535),

Gene: Baudelaire_33 Start: 27825, Stop: 28055, Start Num: 96
Candidate Starts for Baudelaire_33:
(Start: 87 @27789 has 48 MA's), (94, 27816), (Start: 96 @27825 has 2 MA's), (103, 27852), (110, 27882), (116, 27903), (127, 27942), (128, 27945), (130, 27948), (145, 28005), (146, 28014),

Gene: BelmontSKP_37 Start: 25815, Stop: 26045, Start Num: 88
Candidate Starts for BelmontSKP_37:
(Start: 88 @25815 has 78 MA's),

Gene: Bengal_37 Start: 25443, Stop: 25673, Start Num: 88
Candidate Starts for Bengal_37:
(Start: 88 @25443 has 78 MA's),

Gene: Bernstein_33 Start: 23463, Stop: 23702, Start Num: 81
Candidate Starts for Bernstein_33:
(27, 23220), (31, 23250), (Start: 81 @23463 has 7 MA's), (Start: 88 @23472 has 78 MA's), (110, 23559), (145, 23664), (150, 23694),

Gene: Big4_346 Start: 183627, Stop: 183857, Start Num: 91
Candidate Starts for Big4_346:
(Start: 91 @183627 has 14 MA's), (106, 183699), (149, 183846),

Gene: Big4_20 Start: 8933, Stop: 9163, Start Num: 91
Candidate Starts for Big4_20:
(Start: 91 @8933 has 14 MA's), (106, 9005), (149, 9152),

Gene: BourbonZero_30 Start: 28780, Stop: 29001, Start Num: 98
Candidate Starts for BourbonZero_30:
(Start: 87 @28735 has 48 MA's), (93, 28747), (Start: 98 @28780 has 8 MA's), (110, 28828),

Gene: Brahms_33 Start: 23410, Stop: 23649, Start Num: 81
Candidate Starts for Brahms_33:
(27, 23167), (31, 23197), (Start: 81 @23410 has 7 MA's), (Start: 88 @23419 has 78 MA's), (110, 23506), (145, 23611), (150, 23641),

Gene: BrainDrainer_31 Start: 27763, Stop: 27981, Start Num: 98

Candidate Starts for BrainDrainer_31:
(Start: 87 @27718 has 48 MA's), (Start: 98 @27763 has 8 MA's), (130, 27877),

Gene: BronnyJames_44 Start: 38020, Stop: 38232, Start Num: 97
Candidate Starts for BronnyJames_44:
(93, 37993), (Start: 97 @38020 has 1 MA's), (110, 38074), (111, 38077), (127, 38134), (138, 38170),

Gene: BubbaBear_35 Start: 25387, Stop: 25617, Start Num: 88
Candidate Starts for BubbaBear_35:
(Start: 88 @25387 has 78 MA's),

Gene: Buldak_33 Start: 24218, Stop: 24493, Start Num: 72
Candidate Starts for Buldak_33:
(2, 23414), (5, 23633), (18, 23939), (Start: 72 @24218 has 1 MA's), (Start: 88 @24254 has 78 MA's), (110, 24341),

Gene: Burritobowl_36 Start: 25388, Stop: 25618, Start Num: 88
Candidate Starts for Burritobowl_36:
(Start: 88 @25388 has 78 MA's),

Gene: CallinAllBarbz_34 Start: 24734, Stop: 24985, Start Num: 83
Candidate Starts for CallinAllBarbz_34:
(Start: 83 @24734 has 1 MA's), (109, 24827), (142, 24932),

Gene: Calm_30 Start: 27704, Stop: 27973, Start Num: 87
Candidate Starts for Calm_30:
(Start: 87 @27704 has 48 MA's), (Start: 98 @27749 has 8 MA's), (127, 27857),

Gene: CanFranMach_37 Start: 25473, Stop: 25703, Start Num: 88
Candidate Starts for CanFranMach_37:
(47, 25344), (48, 25347), (54, 25365), (58, 25377), (61, 25380), (63, 25389), (64, 25392), (Start: 81 @25464 has 7 MA's), (Start: 88 @25473 has 78 MA's), (106, 25545),

Gene: Casablancas_36 Start: 10074, Stop: 10328, Start Num: 87
Candidate Starts for Casablancas_36:
(77, 10059), (Start: 87 @10074 has 48 MA's), (99, 10119), (112, 10170), (117, 10188), (123, 10206), (125, 10218), (134, 10242),

Gene: Cashington_34 Start: 24734, Stop: 24964, Start Num: 88
Candidate Starts for Cashington_34:
(Start: 88 @24734 has 78 MA's), (125, 24875),

Gene: Celaena_34 Start: 26364, Stop: 26594, Start Num: 88
Candidate Starts for Celaena_34:
(45, 26235), (49, 26244), (51, 26250), (55, 26259), (60, 26271), (62, 26277), (66, 26289), (Start: 81 @26355 has 7 MA's), (Start: 88 @26364 has 78 MA's), (110, 26451), (125, 26505), (145, 26556),

Gene: ChiliPepper_33 Start: 25809, Stop: 26048, Start Num: 81
Candidate Starts for ChiliPepper_33:
(11, 25398), (15, 25461), (16, 25479), (17, 25500), (19, 25509), (22, 25533), (25, 25551), (26, 25557), (28, 25584), (29, 25587), (32, 25608), (33, 25611), (36, 25638), (40, 25650), (41, 25665), (44, 25680), (45, 25689), (49, 25698), (51, 25704), (55, 25713), (60, 25725), (62, 25731), (Start: 81 @25809 has 7 MA's), (Start: 88 @25818 has 78 MA's), (106, 25890), (110, 25905), (125, 25959), (145, 26010), (150,

26040),

Gene: CicholasNage_30 Start: 27692, Stop: 27961, Start Num: 87
Candidate Starts for CicholasNage_30:
(Start: 87 @27692 has 48 MA's), (Start: 98 @27737 has 8 MA's), (127, 27845),

Gene: Claus_32 Start: 28444, Stop: 28665, Start Num: 98
Candidate Starts for Claus_32:
(Start: 87 @28399 has 48 MA's), (Start: 98 @28444 has 8 MA's), (111, 28495), (116, 28513), (148, 28633), (151, 28654),

Gene: Clayda5_34 Start: 23406, Stop: 23636, Start Num: 88
Candidate Starts for Clayda5_34:
(27, 23154), (31, 23184), (Start: 81 @23397 has 7 MA's), (Start: 88 @23406 has 78 MA's), (110, 23493), (145, 23598), (150, 23628),

Gene: CliffHanger_37 Start: 24318, Stop: 24548, Start Num: 88
Candidate Starts for CliffHanger_37:
(Start: 88 @24318 has 78 MA's), (100, 24363), (121, 24441),

Gene: Coltrane_33 Start: 23410, Stop: 23649, Start Num: 81
Candidate Starts for Coltrane_33:
(27, 23167), (31, 23197), (Start: 81 @23410 has 7 MA's), (Start: 88 @23419 has 78 MA's), (110, 23506), (145, 23611), (150, 23641),

Gene: CroZenni_36 Start: 25278, Stop: 25508, Start Num: 88
Candidate Starts for CroZenni_36:
(47, 25149), (48, 25152), (54, 25170), (58, 25182), (61, 25185), (63, 25194), (64, 25197), (Start: 81 @25269 has 7 MA's), (Start: 88 @25278 has 78 MA's),

Gene: CupcakePrincess_37 Start: 25564, Stop: 25806, Start Num: 88
Candidate Starts for CupcakePrincess_37:
(Start: 88 @25564 has 78 MA's), (150, 25798),

Gene: DHan_32 Start: 28380, Stop: 28601, Start Num: 98
Candidate Starts for DHan_32:
(Start: 87 @28335 has 48 MA's), (Start: 98 @28380 has 8 MA's), (111, 28431), (116, 28449), (148, 28569), (151, 28590),

Gene: DanBing_31 Start: 28284, Stop: 28505, Start Num: 98
Candidate Starts for DanBing_31:
(Start: 87 @28239 has 48 MA's), (Start: 98 @28284 has 8 MA's), (111, 28335), (148, 28473), (151, 28494),

Gene: DejaVu_31 Start: 9377, Stop: 9625, Start Num: 87
Candidate Starts for DejaVu_31:
(Start: 71 @9338 has 1 MA's), (Start: 87 @9377 has 48 MA's), (99, 9422), (107, 9458), (148, 9605),

Gene: Deschain_35 Start: 10738, Stop: 10992, Start Num: 87
Candidate Starts for Deschain_35:
(77, 10723), (Start: 87 @10738 has 48 MA's), (99, 10783), (112, 10834), (117, 10852), (123, 10870), (125, 10882), (134, 10906),

Gene: DickRichards_35 Start: 25717, Stop: 25947, Start Num: 88
Candidate Starts for DickRichards_35:
(Start: 88 @25717 has 78 MA's),

Gene: Didgeridoo_38 Start: 25851, Stop: 26093, Start Num: 88
Candidate Starts for Didgeridoo_38:
(Start: 88 @25851 has 78 MA's), (125, 25992),

Gene: DirkDirk_30 Start: 27718, Stop: 27942, Start Num: 98
Candidate Starts for DirkDirk_30:
(Start: 87 @27673 has 48 MA's), (Start: 98 @27718 has 8 MA's), (127, 27826),

Gene: DirtyBubble_36 Start: 26244, Stop: 26477, Start Num: 88
Candidate Starts for DirtyBubble_36:
(47, 26115), (48, 26118), (54, 26136), (58, 26148), (61, 26151), (63, 26160), (Start: 81 @26235 has 7 MA's), (Start: 88 @26244 has 78 MA's), (132, 26394),

Gene: Dismas_34 Start: 25989, Stop: 26219, Start Num: 88
Candidate Starts for Dismas_34:
(11, 25569), (15, 25632), (16, 25650), (17, 25671), (19, 25680), (22, 25704), (25, 25722), (26, 25728), (28, 25755), (29, 25758), (32, 25779), (36, 25809), (40, 25821), (41, 25836), (44, 25851), (45, 25860), (49, 25869), (51, 25875), (55, 25884), (60, 25896), (62, 25902), (Start: 81 @25980 has 7 MA's), (Start: 88 @25989 has 78 MA's), (106, 26061), (110, 26076), (125, 26130), (145, 26181), (150, 26211),

Gene: Dodo_367 Start: 185243, Stop: 185473, Start Num: 91
Candidate Starts for Dodo_367:
(Start: 91 @185243 has 14 MA's), (106, 185315), (119, 185357), (146, 185444), (149, 185462),

Gene: Dodo_21 Start: 7043, Stop: 7273, Start Num: 91
Candidate Starts for Dodo_21:
(Start: 91 @7043 has 14 MA's), (106, 7115), (119, 7157), (146, 7244), (149, 7262),

Gene: Doobus_35 Start: 25098, Stop: 25328, Start Num: 88
Candidate Starts for Doobus_35:
(Start: 88 @25098 has 78 MA's),

Gene: Douzhi_30 Start: 27624, Stop: 27842, Start Num: 98
Candidate Starts for Douzhi_30:
(Start: 87 @27579 has 48 MA's), (Start: 98 @27624 has 8 MA's), (130, 27738),

Gene: DustyDino_38 Start: 10938, Stop: 11192, Start Num: 87
Candidate Starts for DustyDino_38:
(77, 10923), (Start: 87 @10938 has 48 MA's), (99, 10983), (112, 11034), (117, 11052), (123, 11070),

Gene: Eden_34 Start: 24202, Stop: 24432, Start Num: 88
Candidate Starts for Eden_34:
(74, 24169), (Start: 88 @24202 has 78 MA's), (125, 24343), (126, 24349), (135, 24364), (145, 24394), (150, 24424),

Gene: EdogawaKiddo_56 Start: 38208, Stop: 38002, Start Num: 101
Candidate Starts for EdogawaKiddo_56:
(80, 38274), (86, 38265), (Start: 101 @38208 has 1 MA's), (109, 38172), (123, 38133), (134, 38106), (136, 38094),

Gene: Elva_38 Start: 26309, Stop: 26539, Start Num: 88
Candidate Starts for Elva_38:
(45, 26177), (47, 26180), (52, 26195), (56, 26210), (58, 26213), (63, 26225), (Start: 81 @26300 has 7 MA's), (Start: 88 @26309 has 78 MA's),

Gene: Enceladus_30 Start: 27674, Stop: 27943, Start Num: 87
Candidate Starts for Enceladus_30:
(Start: 87 @27674 has 48 MA's), (Start: 98 @27719 has 8 MA's), (127, 27827),

Gene: Erenyeager_35 Start: 10332, Stop: 10586, Start Num: 87
Candidate Starts for Erenyeager_35:
(77, 10317), (Start: 87 @10332 has 48 MA's), (99, 10377), (112, 10428), (117, 10446), (123, 10464),

Gene: Eula_37 Start: 25477, Stop: 25719, Start Num: 88
Candidate Starts for Eula_37:
(Start: 88 @25477 has 78 MA's), (150, 25711),

Gene: Exile_31 Start: 26521, Stop: 26784, Start Num: 88
Candidate Starts for Exile_31:
(Start: 88 @26521 has 78 MA's), (142, 26719), (147, 26752),

Gene: FarmResident_30 Start: 27563, Stop: 27781, Start Num: 98
Candidate Starts for FarmResident_30:
(Start: 87 @27518 has 48 MA's), (Start: 98 @27563 has 8 MA's), (110, 27611), (130, 27677),

Gene: Finalfrontier_36 Start: 26101, Stop: 26331, Start Num: 88
Candidate Starts for Finalfrontier_36:
(Start: 88 @26101 has 78 MA's),

Gene: FlameThrower_34 Start: 25814, Stop: 26044, Start Num: 88
Candidate Starts for FlameThrower_34:
(45, 25685), (49, 25694), (51, 25700), (55, 25709), (60, 25721), (62, 25727), (66, 25739), (Start: 81 @25805 has 7 MA's), (Start: 88 @25814 has 78 MA's), (110, 25901), (119, 25928), (125, 25955), (145, 26006), (150, 26036),

Gene: Fork_31 Start: 9648, Stop: 9902, Start Num: 87
Candidate Starts for Fork_31:
(77, 9633), (Start: 87 @9648 has 48 MA's), (99, 9693), (112, 9744), (117, 9762), (123, 9780),

Gene: Franklin22_35 Start: 24188, Stop: 24418, Start Num: 88
Candidate Starts for Franklin22_35:
(6, 23681), (7, 23687), (9, 23756), (13, 23801), (23, 23906), (30, 23963), (39, 24020), (59, 24095), (63, 24104), (64, 24107), (Start: 88 @24188 has 78 MA's), (106, 24260), (125, 24329), (145, 24380), (150, 24410),

Gene: Fryberger_117 Start: 56141, Stop: 56380, Start Num: 91
Candidate Starts for Fryberger_117:
(Start: 91 @56141 has 14 MA's), (122, 56264), (144, 56336), (145, 56339),

Gene: Gack_33 Start: 23939, Stop: 24169, Start Num: 88
Candidate Starts for Gack_33:

(1, 23093), (3, 23219), (4, 23249), (9, 23507), (13, 23552), (23, 23657), (30, 23714), (39, 23771), (63, 23855), (64, 23858), (Start: 81 @23930 has 7 MA's), (Start: 88 @23939 has 78 MA's), (106, 24011), (119, 24053), (145, 24131),

Gene: Gonephishing_53 Start: 42117, Stop: 42329, Start Num: 97
Candidate Starts for Gonephishing_53:
(93, 42090), (Start: 97 @42117 has 1 MA's), (110, 42171), (111, 42174), (127, 42231), (138, 42267),

Gene: GrimEater_30 Start: 23740, Stop: 23991, Start Num: 88
Candidate Starts for GrimEater_30:
(Start: 88 @23740 has 78 MA's), (141, 23935), (142, 23938), (143, 23947),

Gene: Guey18_121 Start: 57464, Stop: 57703, Start Num: 91
Candidate Starts for Guey18_121:
(Start: 91 @57464 has 14 MA's), (122, 57587), (144, 57659), (145, 57662),

Gene: Hafay_32 Start: 28500, Stop: 28721, Start Num: 98
Candidate Starts for Hafay_32:
(Start: 87 @28455 has 48 MA's), (Start: 98 @28500 has 8 MA's), (111, 28551), (131, 28617), (148, 28689), (151, 28710),

Gene: Halena_30 Start: 27701, Stop: 27970, Start Num: 87
Candidate Starts for Halena_30:
(Start: 87 @27701 has 48 MA's), (Start: 98 @27746 has 8 MA's), (127, 27854),

Gene: Hanray_56 Start: 38212, Stop: 38006, Start Num: 101
Candidate Starts for Hanray_56:
(80, 38278), (86, 38269), (Start: 101 @38212 has 1 MA's), (109, 38176), (123, 38137), (134, 38110), (136, 38098),

Gene: Hidrated_52 Start: 43955, Stop: 44164, Start Num: 97
Candidate Starts for Hidrated_52:
(93, 43928), (Start: 97 @43955 has 1 MA's), (110, 44009), (111, 44012), (127, 44069), (138, 44105), (148, 44153),

Gene: Holex_57 Start: 38228, Stop: 38022, Start Num: 101
Candidate Starts for Holex_57:
(80, 38294), (86, 38285), (Start: 101 @38228 has 1 MA's), (109, 38192), (123, 38153), (134, 38126), (136, 38114),

Gene: HollowPurple_36 Start: 10186, Stop: 10440, Start Num: 87
Candidate Starts for HollowPurple_36:
(77, 10171), (Start: 87 @10186 has 48 MA's), (99, 10231), (112, 10282), (117, 10300), (123, 10318),

Gene: Hortus1_28 Start: 9181, Stop: 9435, Start Num: 87
Candidate Starts for Hortus1_28:
(70, 9133), (79, 9166), (Start: 87 @9181 has 48 MA's), (99, 9226), (107, 9262), (134, 9349),

Gene: Hubbs_30 Start: 9589, Stop: 9837, Start Num: 87
Candidate Starts for Hubbs_30:
(Start: 71 @9550 has 1 MA's), (Start: 87 @9589 has 48 MA's), (99, 9634), (107, 9670), (148, 9817),

Gene: IHOP_37 Start: 33369, Stop: 33557, Start Num: 102

Candidate Starts for IHOP_37:
(Start: 87 @33312 has 48 MA's), (Start: 102 @33369 has 3 MA's), (110, 33402), (112, 33408), (125, 33462), (130, 33474),

Gene: IUFootball_36 Start: 26803, Stop: 26994, Start Num: 101
Candidate Starts for IUFootball_36:
(Start: 87 @26752 has 48 MA's), (Start: 101 @26803 has 1 MA's), (131, 26911),

Gene: Icarian_39 Start: 26879, Stop: 27112, Start Num: 88
Candidate Starts for Icarian_39:
(47, 26750), (48, 26753), (54, 26771), (58, 26783), (61, 26786), (63, 26795), (Start: 81 @26870 has 7 MA's), (Start: 88 @26879 has 78 MA's), (99, 26921),

Gene: IndyLu_35 Start: 25415, Stop: 25645, Start Num: 88
Candidate Starts for IndyLu_35:
(47, 25286), (48, 25289), (54, 25307), (58, 25319), (61, 25322), (63, 25331), (Start: 81 @25406 has 7 MA's), (Start: 88 @25415 has 78 MA's), (125, 25556),

Gene: Issa7_34 Start: 9642, Stop: 9896, Start Num: 87
Candidate Starts for Issa7_34:
(77, 9627), (Start: 87 @9642 has 48 MA's), (99, 9687), (112, 9738), (117, 9756), (123, 9774),

Gene: Jabb_37 Start: 25564, Stop: 25806, Start Num: 88
Candidate Starts for Jabb_37:
(Start: 88 @25564 has 78 MA's), (150, 25798),

Gene: Jacko_31 Start: 9673, Stop: 9921, Start Num: 87
Candidate Starts for Jacko_31:
(Start: 87 @9673 has 48 MA's), (93, 9685), (99, 9718), (136, 9853),

Gene: Jankie_31 Start: 23923, Stop: 24174, Start Num: 88
Candidate Starts for Jankie_31:
(Start: 88 @23923 has 78 MA's), (141, 24118), (142, 24121),

Gene: Jobypre_31 Start: 28829, Stop: 29050, Start Num: 98
Candidate Starts for Jobypre_31:
(Start: 87 @28784 has 48 MA's), (93, 28796), (Start: 98 @28829 has 8 MA's),

Gene: JoeDirt_30 Start: 27672, Stop: 27941, Start Num: 87
Candidate Starts for JoeDirt_30:
(Start: 87 @27672 has 48 MA's), (Start: 98 @27717 has 8 MA's), (127, 27825),

Gene: Johnathan_35 Start: 24821, Stop: 25051, Start Num: 88
Candidate Starts for Johnathan_35:
(Start: 88 @24821 has 78 MA's),

Gene: Jovita_37 Start: 25579, Stop: 25821, Start Num: 88
Candidate Starts for Jovita_37:
(Start: 88 @25579 has 78 MA's), (150, 25813),

Gene: Juicebox_39 Start: 32245, Stop: 32553, Start Num: 57
Candidate Starts for Juicebox_39:

(Start: 57 @32245 has 1 MA's), (68, 32269), (69, 32281), (Start: 72 @32302 has 1 MA's), (73, 32305), (92, 32350), (95, 32368), (105, 32404), (108, 32422), (113, 32443), (115, 32446), (118, 32455), (136, 32518),

Gene: Kahlid_32 Start: 28472, Stop: 28693, Start Num: 98
Candidate Starts for Kahlid_32:
(Start: 87 @28427 has 48 MA's), (Start: 98 @28472 has 8 MA's), (111, 28523), (131, 28589), (148, 28661), (151, 28682),

Gene: Kamdara_34 Start: 25994, Stop: 26224, Start Num: 88
Candidate Starts for Kamdara_34:
(11, 25574), (15, 25637), (16, 25655), (17, 25676), (19, 25685), (22, 25709), (25, 25727), (26, 25733), (28, 25760), (29, 25763), (32, 25784), (33, 25787), (34, 25796), (36, 25814), (40, 25826), (41, 25841), (44, 25856), (45, 25865), (49, 25874), (51, 25880), (55, 25889), (60, 25901), (62, 25907), (Start: 81 @25985 has 7 MA's), (Start: 88 @25994 has 78 MA's), (106, 26066), (110, 26081), (125, 26135), (145, 26186), (150, 26216),

Gene: Kate33_36 Start: 25175, Stop: 25417, Start Num: 88
Candidate Starts for Kate33_36:
(Start: 88 @25175 has 78 MA's), (125, 25316),

Gene: Katzastrophic_35 Start: 25943, Stop: 26173, Start Num: 88
Candidate Starts for Katzastrophic_35:
(45, 25814), (49, 25823), (51, 25829), (55, 25838), (60, 25850), (62, 25856), (66, 25868), (Start: 81 @25934 has 7 MA's), (Start: 88 @25943 has 78 MA's), (110, 26030), (125, 26084), (145, 26135), (150, 26165),

Gene: Keelan_118 Start: 57003, Stop: 57242, Start Num: 91
Candidate Starts for Keelan_118:
(67, 56925), (Start: 91 @57003 has 14 MA's), (99, 57042), (103, 57057), (121, 57123), (144, 57198), (147, 57219),

Gene: Kenzers_36 Start: 25402, Stop: 25644, Start Num: 88
Candidate Starts for Kenzers_36:
(Start: 88 @25402 has 78 MA's), (150, 25636),

Gene: Khuang_61 Start: 36119, Stop: 36397, Start Num: 90
Candidate Starts for Khuang_61:
(65, 36041), (Start: 90 @36119 has 2 MA's), (99, 36164), (113, 36221), (114, 36224), (134, 36290),

Gene: Kieran_34 Start: 25998, Stop: 26228, Start Num: 88
Candidate Starts for Kieran_34:
(11, 25578), (15, 25641), (16, 25659), (17, 25680), (19, 25689), (22, 25713), (25, 25731), (26, 25737), (28, 25764), (29, 25767), (32, 25788), (33, 25791), (36, 25818), (40, 25830), (41, 25845), (44, 25860), (45, 25869), (49, 25878), (51, 25884), (55, 25893), (60, 25905), (62, 25911), (Start: 81 @25989 has 7 MA's), (Start: 88 @25998 has 78 MA's), (106, 26070), (110, 26085), (125, 26139), (145, 26190), (150, 26220),

Gene: Kikiko_7 Start: 5275, Stop: 4988, Start Num: 85
Candidate Starts for Kikiko_7:
(85, 5275), (99, 5227), (109, 5185), (133, 5101),

Gene: KirDoubleO7_29 Start: 28812, Stop: 29033, Start Num: 98

Candidate Starts for KirDoubleO7_29:
(Start: 87 @28767 has 48 MA's), (93, 28779), (Start: 98 @28812 has 8 MA's), (110, 28860),

Gene: Kumotta_57 Start: 33061, Stop: 33339, Start Num: 88
Candidate Starts for Kumotta_57:
(Start: 88 @33061 has 78 MA's), (99, 33109), (129, 33223),

Gene: Lahqtemish_35 Start: 25448, Stop: 25690, Start Num: 88
Candidate Starts for Lahqtemish_35:
(Start: 88 @25448 has 78 MA's), (125, 25589),

Gene: LeBron_30 Start: 27716, Stop: 27985, Start Num: 87
Candidate Starts for LeBron_30:
(Start: 87 @27716 has 48 MA's), (Start: 98 @27761 has 8 MA's), (127, 27869),

Gene: Leopard_52 Start: 39719, Stop: 39474, Start Num: 87
Candidate Starts for Leopard_52:
(Start: 87 @39719 has 48 MA's), (103, 39659), (109, 39632), (120, 39593), (125, 39569), (127, 39563), (130, 39557), (137, 39533),

Gene: Lewan_32 Start: 28467, Stop: 28688, Start Num: 98
Candidate Starts for Lewan_32:
(Start: 87 @28422 has 48 MA's), (Start: 98 @28467 has 8 MA's), (111, 28518), (131, 28584), (148, 28656), (151, 28677),

Gene: Liebe_36 Start: 26803, Stop: 26994, Start Num: 101
Candidate Starts for Liebe_36:
(Start: 87 @26752 has 48 MA's), (Start: 101 @26803 has 1 MA's), (131, 26911),

Gene: Lilo27_37 Start: 25387, Stop: 25629, Start Num: 88
Candidate Starts for Lilo27_37:
(Start: 88 @25387 has 78 MA's), (150, 25621),

Gene: LimaBean_35 Start: 24870, Stop: 25100, Start Num: 88
Candidate Starts for LimaBean_35:
(Start: 88 @24870 has 78 MA's),

Gene: LisoBros_35 Start: 26801, Stop: 27052, Start Num: 88
Candidate Starts for LisoBros_35:
(8, 26342), (61, 26714), (Start: 88 @26801 has 78 MA's), (110, 26891), (125, 26951), (139, 26990), (142, 26999), (143, 27008), (146, 27023), (147, 27032),

Gene: Loviatar_37 Start: 27431, Stop: 27664, Start Num: 88
Candidate Starts for Loviatar_37:
(47, 27302), (48, 27305), (54, 27323), (58, 27335), (61, 27338), (63, 27347), (Start: 81 @27422 has 7 MA's), (Start: 88 @27431 has 78 MA's), (99, 27473),

Gene: Lupine_29 Start: 9261, Stop: 9509, Start Num: 87
Candidate Starts for Lupine_29:
(Start: 71 @9222 has 1 MA's), (Start: 87 @9261 has 48 MA's), (99, 9306), (107, 9342), (148, 9489),

Gene: Lyell_35 Start: 10250, Stop: 10504, Start Num: 87
Candidate Starts for Lyell_35:

(77, 10235), (Start: 87 @10250 has 48 MA's), (99, 10295), (112, 10346), (117, 10364), (123, 10382),

Gene: Lynlen_36 Start: 25402, Stop: 25644, Start Num: 88
Candidate Starts for Lynlen_36:
(Start: 88 @25402 has 78 MA's), (150, 25636),

Gene: Lynnae_32 Start: 28455, Stop: 28676, Start Num: 98
Candidate Starts for Lynnae_32:
(Start: 87 @28410 has 48 MA's), (Start: 98 @28455 has 8 MA's), (111, 28506), (131, 28572), (148, 28644), (151, 28665),

Gene: MAckerman_30 Start: 27690, Stop: 27959, Start Num: 87
Candidate Starts for MAckerman_30:
(Start: 87 @27690 has 48 MA's), (Start: 98 @27735 has 8 MA's), (127, 27843),

Gene: MargaretKali_53 Start: 31679, Stop: 31957, Start Num: 88
Candidate Starts for MargaretKali_53:
(Start: 88 @31679 has 78 MA's), (99, 31727), (129, 31841),

Gene: Marleymoo_53 Start: 43853, Stop: 44062, Start Num: 97
Candidate Starts for Marleymoo_53:
(93, 43826), (Start: 97 @43853 has 1 MA's), (110, 43907), (111, 43910), (127, 43967), (138, 44003), (148, 44051),

Gene: Milomuff_36 Start: 25291, Stop: 25521, Start Num: 88
Candidate Starts for Milomuff_36:
(50, 25171), (58, 25195), (62, 25204), (63, 25207), (64, 25210), (Start: 81 @25282 has 7 MA's), (Start: 88 @25291 has 78 MA's),

Gene: Mistmere_28 Start: 8094, Stop: 8348, Start Num: 86
Candidate Starts for Mistmere_28:
(86, 8094), (99, 8142),

Gene: Moostard_31 Start: 28832, Stop: 29053, Start Num: 98
Candidate Starts for Moostard_31:
(Start: 87 @28787 has 48 MA's), (93, 28799), (Start: 98 @28832 has 8 MA's),

Gene: MsUbiquitous_37 Start: 25564, Stop: 25806, Start Num: 88
Candidate Starts for MsUbiquitous_37:
(Start: 88 @25564 has 78 MA's), (150, 25798),

Gene: Musetta_35 Start: 10358, Stop: 10612, Start Num: 87
Candidate Starts for Musetta_35:
(77, 10343), (Start: 87 @10358 has 48 MA's), (99, 10403), (134, 10526),

Gene: Necrophoxinus_37 Start: 10946, Stop: 11200, Start Num: 87
Candidate Starts for Necrophoxinus_37:
(77, 10931), (Start: 87 @10946 has 48 MA's), (99, 10991), (112, 11042), (117, 11060), (123, 11078),

Gene: Nicky22_37 Start: 25941, Stop: 26183, Start Num: 88
Candidate Starts for Nicky22_37:
(Start: 88 @25941 has 78 MA's), (150, 26175),

Gene: OhShagHennessy_30 Start: 27655, Stop: 27924, Start Num: 87
Candidate Starts for OhShagHennessy_30:
(Start: 87 @27655 has 48 MA's), (Start: 98 @27700 has 8 MA's), (127, 27808),

Gene: OlinDD_28 Start: 9180, Stop: 9434, Start Num: 87
Candidate Starts for OlinDD_28:
(70, 9132), (79, 9165), (Start: 87 @9180 has 48 MA's), (99, 9225), (107, 9261), (134, 9348),

Gene: Olliecat_33 Start: 24245, Stop: 24484, Start Num: 88
Candidate Starts for Olliecat_33:
(5, 23624), (18, 23930), (Start: 88 @24245 has 78 MA's),

Gene: Onyinye_53 Start: 39601, Stop: 39356, Start Num: 87
Candidate Starts for Onyinye_53:
(Start: 87 @39601 has 48 MA's), (103, 39541), (109, 39514), (120, 39475), (125, 39451), (127, 39445), (130, 39439), (137, 39415),

Gene: PYPDinur_30 Start: 27624, Stop: 27842, Start Num: 98
Candidate Starts for PYPDinur_30:
(Start: 87 @27579 has 48 MA's), (Start: 98 @27624 has 8 MA's), (130, 27738),

Gene: PastaFagioli_35 Start: 25432, Stop: 25674, Start Num: 88
Candidate Starts for PastaFagioli_35:
(Start: 88 @25432 has 78 MA's), (125, 25573),

Gene: PauloDiaboli_20 Start: 7036, Stop: 7266, Start Num: 91
Candidate Starts for PauloDiaboli_20:
(Start: 91 @7036 has 14 MA's), (106, 7108), (119, 7150), (146, 7237), (149, 7255),

Gene: PauloDiaboli_375 Start: 183665, Stop: 183895, Start Num: 91
Candidate Starts for PauloDiaboli_375:
(Start: 91 @183665 has 14 MA's), (106, 183737), (119, 183779), (146, 183866), (149, 183884),

Gene: Pavlo_29 Start: 9536, Stop: 9784, Start Num: 87
Candidate Starts for Pavlo_29:
(Start: 71 @9497 has 1 MA's), (Start: 87 @9536 has 48 MA's), (99, 9581), (107, 9617), (148, 9764),

Gene: Pecas_36 Start: 25476, Stop: 25718, Start Num: 88
Candidate Starts for Pecas_36:
(Start: 88 @25476 has 78 MA's), (150, 25710),

Gene: Phaja_37 Start: 33368, Stop: 33556, Start Num: 102
Candidate Starts for Phaja_37:
(Start: 87 @33311 has 48 MA's), (Start: 102 @33368 has 3 MA's), (110, 33401), (112, 33407), (125, 33461), (130, 33473),

Gene: PhigPhack_37 Start: 25302, Stop: 25544, Start Num: 88
Candidate Starts for PhigPhack_37:
(Start: 88 @25302 has 78 MA's), (125, 25443),

Gene: PhillyPhilly_30 Start: 9402, Stop: 9689, Start Num: 71
Candidate Starts for PhillyPhilly_30:
(Start: 71 @9402 has 1 MA's), (Start: 87 @9441 has 48 MA's), (99, 9486), (107, 9522), (148, 9669),

Gene: Phisb_37 Start: 25535, Stop: 25777, Start Num: 88
Candidate Starts for Phisb_37:
(47, 25406), (54, 25427), (58, 25439), (61, 25442), (63, 25451), (64, 25454), (Start: 81 @25526 has 7 MA's), (Start: 88 @25535 has 78 MA's), (125, 25676),

Gene: Pioneer3_28 Start: 9179, Stop: 9433, Start Num: 87
Candidate Starts for Pioneer3_28:
(70, 9131), (79, 9164), (Start: 87 @9179 has 48 MA's), (99, 9224), (107, 9260), (134, 9347),

Gene: Pitbull_58 Start: 33370, Stop: 33633, Start Num: 84
Candidate Starts for Pitbull_58:
(65, 33298), (Start: 84 @33370 has 1 MA's), (125, 33526), (126, 33532), (134, 33541), (146, 33598),

Gene: Platte_28 Start: 8949, Stop: 9203, Start Num: 87
Candidate Starts for Platte_28:
(70, 8901), (79, 8934), (Start: 87 @8949 has 48 MA's), (99, 8994), (107, 9030), (134, 9117),

Gene: PondAmelia_47 Start: 26411, Stop: 26644, Start Num: 88
Candidate Starts for PondAmelia_47:
(63, 26327), (Start: 81 @26402 has 7 MA's), (Start: 88 @26411 has 78 MA's), (150, 26636),

Gene: Poochiewood_30 Start: 27690, Stop: 27959, Start Num: 87
Candidate Starts for Poochiewood_30:
(Start: 87 @27690 has 48 MA's), (Start: 98 @27735 has 8 MA's),

Gene: QMacho_38 Start: 25959, Stop: 26201, Start Num: 88
Candidate Starts for QMacho_38:
(Start: 88 @25959 has 78 MA's), (150, 26193),

Gene: Quby_30 Start: 27518, Stop: 27736, Start Num: 98
Candidate Starts for Quby_30:
(Start: 87 @27473 has 48 MA's), (Start: 98 @27518 has 8 MA's), (110, 27566), (130, 27632),

Gene: Quenya_35 Start: 25660, Stop: 25890, Start Num: 88
Candidate Starts for Quenya_35:
(12, 25243), (20, 25348), (28, 25423), (32, 25447), (38, 25486), (42, 25513), (43, 25516), (44, 25519), (63, 25576), (64, 25579), (66, 25585), (Start: 81 @25651 has 7 MA's), (Start: 88 @25660 has 78 MA's), (110, 25747), (125, 25801), (145, 25852), (150, 25882),

Gene: Rollins_33 Start: 23463, Stop: 23702, Start Num: 81
Candidate Starts for Rollins_33:
(27, 23220), (31, 23250), (Start: 81 @23463 has 7 MA's), (Start: 88 @23472 has 78 MA's), (110, 23559), (145, 23664), (150, 23694),

Gene: Roman_30 Start: 9436, Stop: 9684, Start Num: 87
Candidate Starts for Roman_30:
(Start: 71 @9397 has 1 MA's), (Start: 87 @9436 has 48 MA's), (99, 9481), (107, 9517), (148, 9664),

Gene: Rona_34 Start: 25980, Stop: 26210, Start Num: 88
Candidate Starts for Rona_34:
(11, 25560), (15, 25623), (16, 25641), (17, 25662), (19, 25671), (22, 25695), (25, 25713), (26, 25719), (28, 25746), (29, 25749), (32, 25770), (33, 25773), (40, 25812), (41, 25827), (44, 25842), (45, 25851),

(49, 25860), (51, 25866), (55, 25875), (60, 25887), (62, 25893), (Start: 81 @25971 has 7 MA's), (Start: 88 @25980 has 78 MA's), (106, 26052), (110, 26067), (145, 26172), (150, 26202),

Gene: Ronaldo_118 Start: 57046, Stop: 57285, Start Num: 91
Candidate Starts for Ronaldo_118:
(Start: 91 @57046 has 14 MA's), (122, 57169), (144, 57241), (145, 57244),

Gene: Rose5_30 Start: 27690, Stop: 27959, Start Num: 87
Candidate Starts for Rose5_30:
(Start: 87 @27690 has 48 MA's), (Start: 98 @27735 has 8 MA's), (127, 27843),

Gene: RoseMarie_41 Start: 35246, Stop: 35443, Start Num: 103
Candidate Starts for RoseMarie_41:
(46, 35054), (78, 35165), (Start: 87 @35183 has 48 MA's), (99, 35231), (103, 35246), (110, 35276), (127, 35342), (131, 35351),

Gene: Rossetti_32 Start: 28739, Stop: 28960, Start Num: 98
Candidate Starts for Rossetti_32:
(Start: 87 @28694 has 48 MA's), (Start: 98 @28739 has 8 MA's), (131, 28856), (151, 28949),

Gene: Rumpelstiltskin_32 Start: 28735, Stop: 28956, Start Num: 98
Candidate Starts for Rumpelstiltskin_32:
(Start: 87 @28690 has 48 MA's), (Start: 98 @28735 has 8 MA's), (111, 28786), (131, 28852), (148, 28924), (151, 28945),

Gene: RunningBrook_36 Start: 10938, Stop: 11192, Start Num: 87
Candidate Starts for RunningBrook_36:
(77, 10923), (Start: 87 @10938 has 48 MA's), (99, 10983), (112, 11034), (117, 11052), (123, 11070),

Gene: SanaSana_39 Start: 27081, Stop: 27314, Start Num: 88
Candidate Starts for SanaSana_39:
(47, 26952), (48, 26955), (54, 26973), (58, 26985), (61, 26988), (63, 26997), (Start: 81 @27072 has 7 MA's), (Start: 88 @27081 has 78 MA's), (124, 27216), (146, 27282),

Gene: SansAfet_37 Start: 25401, Stop: 25631, Start Num: 88
Candidate Starts for SansAfet_37:
(Start: 88 @25401 has 78 MA's),

Gene: SarBear_36 Start: 25256, Stop: 25498, Start Num: 88
Candidate Starts for SarBear_36:
(Start: 88 @25256 has 78 MA's), (150, 25490),

Gene: Saradis_31 Start: 9499, Stop: 9747, Start Num: 87
Candidate Starts for Saradis_31:
(Start: 71 @9460 has 1 MA's), (Start: 87 @9499 has 48 MA's), (99, 9544), (107, 9580), (148, 9727),

Gene: Sarshaun_32 Start: 28500, Stop: 28721, Start Num: 98
Candidate Starts for Sarshaun_32:
(Start: 87 @28455 has 48 MA's), (Start: 98 @28500 has 8 MA's), (111, 28551), (131, 28617), (148, 28689), (151, 28710),

Gene: Schmidt_57 Start: 36601, Stop: 36840, Start Num: 90
Candidate Starts for Schmidt_57:

(51, 36481), (Start: 90 @36601 has 2 MA's), (99, 36643), (104, 36658), (108, 36682), (112, 36694), (133, 36763), (135, 36772), (148, 36832),

Gene: Shaboozey_44 Start: 38020, Stop: 38232, Start Num: 97
Candidate Starts for Shaboozey_44:
(93, 37993), (Start: 97 @38020 has 1 MA's), (110, 38074), (111, 38077), (127, 38134), (138, 38170),

Gene: Sharkboy_35 Start: 26070, Stop: 26309, Start Num: 81
Candidate Starts for Sharkboy_35:
(11, 25659), (15, 25722), (16, 25740), (17, 25761), (19, 25770), (22, 25794), (25, 25812), (26, 25818), (28, 25845), (29, 25848), (32, 25869), (33, 25872), (36, 25899), (40, 25911), (41, 25926), (44, 25941), (45, 25950), (49, 25959), (51, 25965), (55, 25974), (60, 25986), (62, 25992), (Start: 81 @26070 has 7 MA's), (Start: 88 @26079 has 78 MA's), (106, 26151), (110, 26166), (125, 26220), (145, 26271), (150, 26301),

Gene: Shayna_36 Start: 24764, Stop: 24994, Start Num: 88
Candidate Starts for Shayna_36:
(Start: 88 @24764 has 78 MA's), (100, 24809),

Gene: Sheng711_30 Start: 27624, Stop: 27842, Start Num: 98
Candidate Starts for Sheng711_30:
(Start: 87 @27579 has 48 MA's), (Start: 98 @27624 has 8 MA's), (130, 27738),

Gene: ShereKhan_39 Start: 34175, Stop: 34363, Start Num: 102
Candidate Starts for ShereKhan_39:
(Start: 87 @34118 has 48 MA's), (Start: 102 @34175 has 3 MA's), (110, 34208), (112, 34214), (125, 34268), (130, 34280),

Gene: Shroomer_39 Start: 10466, Stop: 10720, Start Num: 87
Candidate Starts for Shroomer_39:
(21, 10181), (77, 10451), (Start: 87 @10466 has 48 MA's), (99, 10511), (125, 10610), (134, 10634),

Gene: Silverleaf_30 Start: 27690, Stop: 27959, Start Num: 87
Candidate Starts for Silverleaf_30:
(Start: 87 @27690 has 48 MA's), (Start: 98 @27735 has 8 MA's), (127, 27843),

Gene: SirBeanington_36 Start: 25577, Stop: 25819, Start Num: 88
Candidate Starts for SirBeanington_36:
(Start: 88 @25577 has 78 MA's), (150, 25811),

Gene: Skylord_33 Start: 23403, Stop: 23633, Start Num: 88
Candidate Starts for Skylord_33:
(27, 23151), (31, 23181), (Start: 81 @23394 has 7 MA's), (Start: 88 @23403 has 78 MA's), (110, 23490), (145, 23595), (150, 23625),

Gene: Slay_37 Start: 25937, Stop: 26179, Start Num: 88
Candidate Starts for Slay_37:
(Start: 88 @25937 has 78 MA's), (150, 26171),

Gene: SoJulia_33 Start: 28728, Stop: 28949, Start Num: 98
Candidate Starts for SoJulia_33:
(Start: 87 @28683 has 48 MA's), (Start: 98 @28728 has 8 MA's), (111, 28779), (131, 28845), (148, 28917), (151, 28938),

Gene: Soap141_32 Start: 28500, Stop: 28721, Start Num: 98
Candidate Starts for Soap141_32:
(Start: 87 @28455 has 48 MA's), (Start: 98 @28500 has 8 MA's), (111, 28551), (131, 28617), (148, 28689), (151, 28710),

Gene: Softsoap_36 Start: 25312, Stop: 25542, Start Num: 88
Candidate Starts for Softsoap_36:
(Start: 88 @25312 has 78 MA's),

Gene: Solea_37 Start: 25291, Stop: 25521, Start Num: 88
Candidate Starts for Solea_37:
(50, 25171), (58, 25195), (62, 25204), (63, 25207), (64, 25210), (Start: 81 @25282 has 7 MA's), (Start: 88 @25291 has 78 MA's),

Gene: Solimine_31 Start: 9914, Stop: 10162, Start Num: 87
Candidate Starts for Solimine_31:
(Start: 71 @9875 has 1 MA's), (Start: 87 @9914 has 48 MA's), (99, 9959), (107, 9995), (148, 10142),

Gene: Soondubu_31 Start: 26525, Stop: 26788, Start Num: 88
Candidate Starts for Soondubu_31:
(Start: 88 @26525 has 78 MA's), (142, 26723), (147, 26756),

Gene: Squint_50 Start: 40769, Stop: 40981, Start Num: 97
Candidate Starts for Squint_50:
(93, 40742), (Start: 97 @40769 has 1 MA's), (110, 40823), (111, 40826), (127, 40883), (138, 40919),

Gene: Squircle_33 Start: 24244, Stop: 24483, Start Num: 88
Candidate Starts for Squircle_33:
(5, 23623), (18, 23929), (Start: 88 @24244 has 78 MA's),

Gene: SteakFry_37 Start: 10186, Stop: 10440, Start Num: 87
Candidate Starts for SteakFry_37:
(77, 10171), (Start: 87 @10186 has 48 MA's), (99, 10231), (112, 10282), (117, 10300), (123, 10318),

Gene: StevieWelch_35 Start: 10338, Stop: 10592, Start Num: 87
Candidate Starts for StevieWelch_35:
(77, 10323), (Start: 87 @10338 has 48 MA's), (99, 10383), (117, 10452), (123, 10470),

Gene: Stoor_37 Start: 26750, Stop: 26983, Start Num: 88
Candidate Starts for Stoor_37:
(47, 26621), (48, 26624), (54, 26642), (61, 26657), (63, 26666), (Start: 81 @26741 has 7 MA's), (Start: 88 @26750 has 78 MA's),

Gene: Stromboli_37 Start: 26614, Stop: 26847, Start Num: 88
Candidate Starts for Stromboli_37:
(47, 26485), (48, 26488), (54, 26506), (58, 26518), (61, 26521), (63, 26530), (Start: 81 @26605 has 7 MA's), (Start: 88 @26614 has 78 MA's), (132, 26764),

Gene: SunnyD_36 Start: 24766, Stop: 24996, Start Num: 88
Candidate Starts for SunnyD_36:
(Start: 88 @24766 has 78 MA's), (100, 24811),

Gene: Swervy_37 Start: 25456, Stop: 25698, Start Num: 88
Candidate Starts for Swervy_37:
(Start: 88 @25456 has 78 MA's), (150, 25690),

Gene: Tandem_28 Start: 9118, Stop: 9372, Start Num: 87
Candidate Starts for Tandem_28:
(70, 9070), (79, 9103), (Start: 87 @9118 has 48 MA's), (99, 9163), (107, 9199), (134, 9286),

Gene: Teagster_37 Start: 25597, Stop: 25827, Start Num: 88
Candidate Starts for Teagster_37:
(Start: 88 @25597 has 78 MA's), (100, 25642),

Gene: TukTuk_37 Start: 25527, Stop: 25769, Start Num: 88
Candidate Starts for TukTuk_37:
(Start: 88 @25527 has 78 MA's), (125, 25668),

Gene: Tyson_30 Start: 27735, Stop: 27959, Start Num: 98
Candidate Starts for Tyson_30:
(Start: 87 @27690 has 48 MA's), (Start: 98 @27735 has 8 MA's), (127, 27843),

Gene: UPIE_30 Start: 27688, Stop: 27957, Start Num: 87
Candidate Starts for UPIE_30:
(Start: 87 @27688 has 48 MA's), (Start: 98 @27733 has 8 MA's), (127, 27841),

Gene: Uterion_32 Start: 10006, Stop: 10254, Start Num: 87
Candidate Starts for Uterion_32:
(Start: 71 @9967 has 1 MA's), (Start: 87 @10006 has 48 MA's), (99, 10051), (107, 10087), (148, 10234),

Gene: Vitas_33 Start: 23412, Stop: 23642, Start Num: 88
Candidate Starts for Vitas_33:
(27, 23160), (31, 23190), (Start: 81 @23403 has 7 MA's), (Start: 88 @23412 has 78 MA's), (110, 23499), (145, 23604), (150, 23634),

Gene: Volt_121 Start: 57210, Stop: 57449, Start Num: 91
Candidate Starts for Volt_121:
(Start: 91 @57210 has 14 MA's), (122, 57333), (144, 57405), (145, 57408),

Gene: WalkingDead_38 Start: 27005, Stop: 27238, Start Num: 88
Candidate Starts for WalkingDead_38:
(47, 26876), (48, 26879), (54, 26897), (58, 26909), (61, 26912), (63, 26921), (Start: 81 @26996 has 7 MA's), (Start: 88 @27005 has 78 MA's),

Gene: Wamburgrxpress_30 Start: 27703, Stop: 27972, Start Num: 87
Candidate Starts for Wamburgrxpress_30:
(Start: 87 @27703 has 48 MA's), (Start: 98 @27748 has 8 MA's), (127, 27856),

Gene: Welcome_36 Start: 10355, Stop: 10609, Start Num: 87
Candidate Starts for Welcome_36:
(24, 10088), (77, 10340), (Start: 87 @10355 has 48 MA's), (99, 10400), (112, 10451), (117, 10469), (123, 10487),

Gene: Wolfstar_31 Start: 9938, Stop: 10189, Start Num: 87

Candidate Starts for Wolfstar_31:
(10, 9515), (14, 9551), (75, 9908), (76, 9914), (Start: 87 @9938 has 48 MA's), (99, 9983), (107, 10019), (134, 10106),

Gene: Wyatt2_30 Start: 27690, Stop: 27959, Start Num: 87
Candidate Starts for Wyatt2_30:
(Start: 87 @27690 has 48 MA's), (Start: 98 @27735 has 8 MA's), (127, 27843),

Gene: Yuma_34 Start: 10257, Stop: 10511, Start Num: 87
Candidate Starts for Yuma_34:
(77, 10242), (Start: 87 @10257 has 48 MA's), (99, 10302), (134, 10425),

Gene: Zaria_30 Start: 27704, Stop: 27973, Start Num: 87
Candidate Starts for Zaria_30:
(Start: 87 @27704 has 48 MA's), (Start: 98 @27749 has 8 MA's), (127, 27857),

Gene: ZhongYanYuan_31 Start: 28288, Stop: 28509, Start Num: 98
Candidate Starts for ZhongYanYuan_31:
(Start: 87 @28243 has 48 MA's), (Start: 98 @28288 has 8 MA's), (111, 28339), (148, 28477), (151, 28498),

Gene: Ziko_119 Start: 57052, Stop: 57291, Start Num: 91
Candidate Starts for Ziko_119:
(Start: 91 @57052 has 14 MA's), (122, 57175), (144, 57247), (145, 57250),

Gene: Zooman_331 Start: 183965, Stop: 184198, Start Num: 89
Candidate Starts for Zooman_331:
(Start: 89 @183965 has 3 MA's), (106, 184040), (149, 184187),

Gene: Zooman_18 Start: 8314, Stop: 8547, Start Num: 89
Candidate Starts for Zooman_18:
(Start: 89 @8314 has 3 MA's), (106, 8389), (149, 8536),