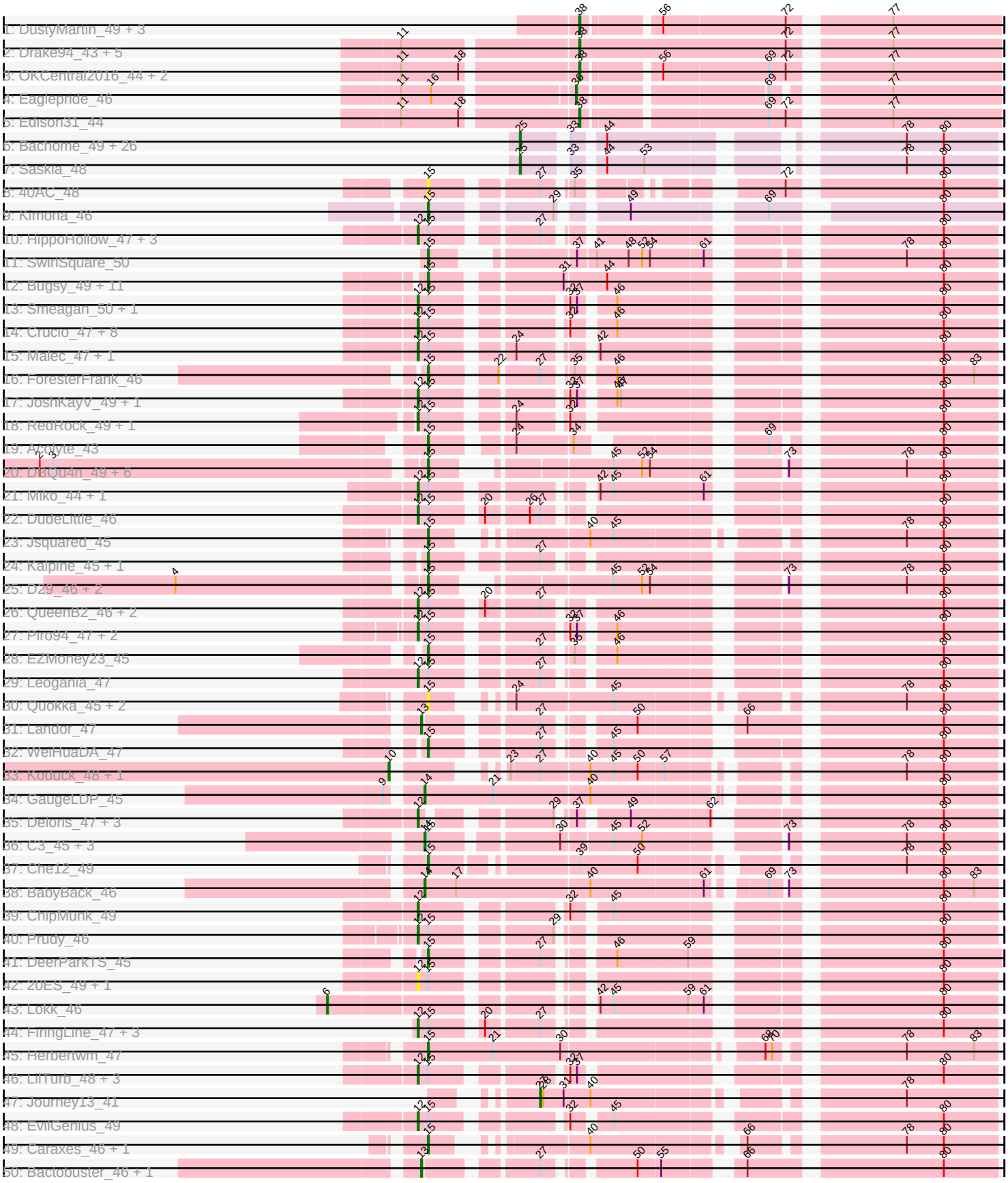
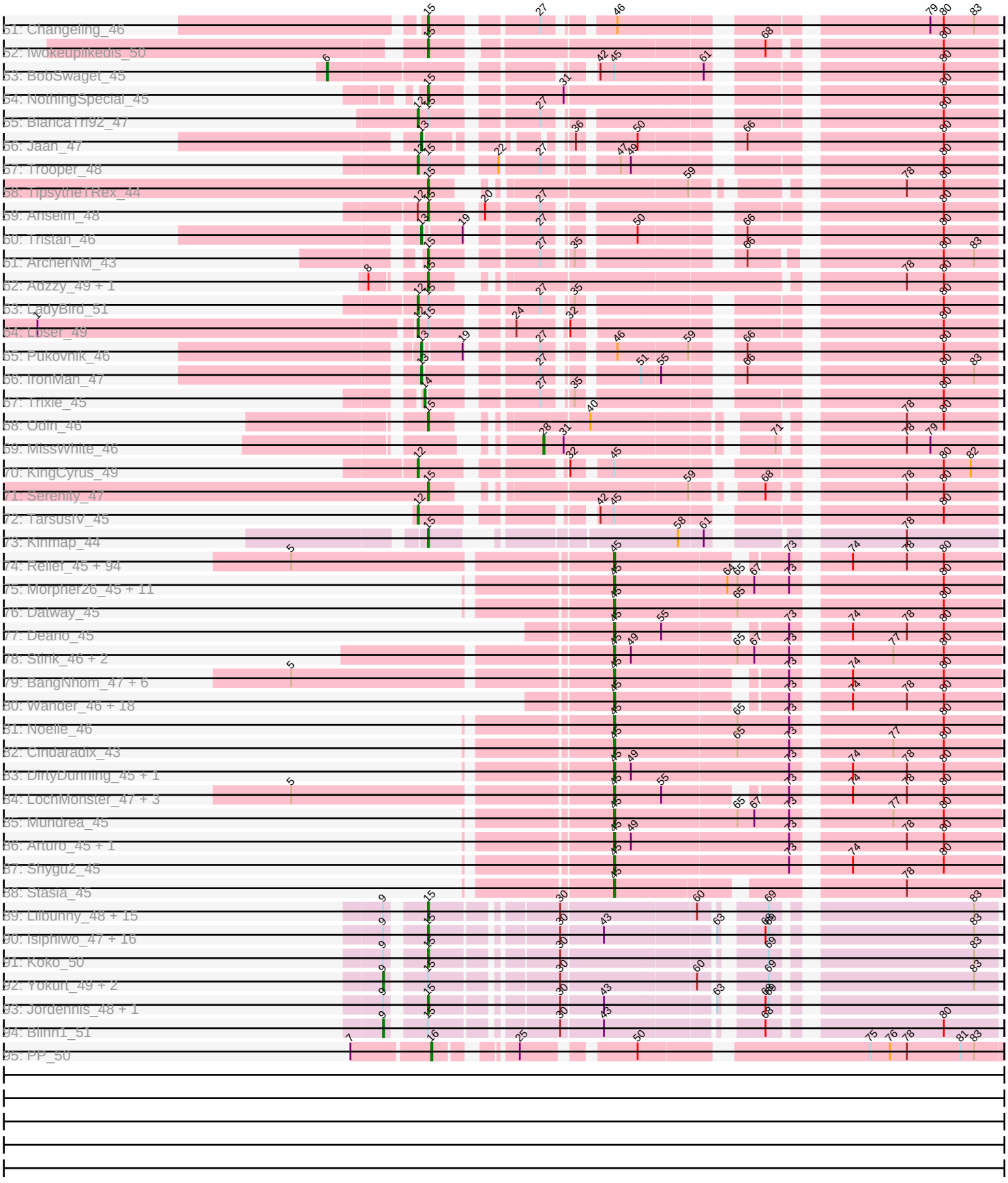
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1: DustyMartin_49 + 3
2: Drake94_43 + 5
3: OKCentral2016_44 + 2
4: Eaglepride_46
5: Edison31_44
6: Bachome_49 + 26
7: Saskia_48
8: 40AC_48
9: Kimona_46
10: HippoHollow_47 + 3
11: SwimSquare_50
12: Bugsy_49 + 11
13: Smeagan_50 + 1
14: Crucio_47 + 8
15: Malec_47 + 1
16: ForesterFrank_46
17: JoshKayV_49 + 1
18: RedRock_49 + 1
19: Acolyte_43
20: DBQu4n_49 + 6
21: Miko_44 + 1
22: DudeLittle_46
23: Jsquared_45
24: Kalpine_45 + 1
25: D29_46 + 2
26: QueenB2_46 + 2
27: Piro94_47 + 2
28: EZMoney23_45
29: Leogania_47
30: Quokka_45 + 2
31: Landor_47
32: WeiHuaDA_47
33: Koduck_48 + 1
34: GaugeLDP_45
35: Delons_47 + 3
36: C3_45 + 3
37: Che12_49
38: BabyBack_46
39: ChipMunk_49
40: Prudy_46
41: DeerParkTS_45
42: 20ES_49 + 1
43: Lokk_46
44: FiringLine_47 + 3
45: Herbertwm_47
46: LilTurb_48 + 3
47: Journey13_41
48: EvilGenius_49
49: Caraxes_46 + 1
50: Bactobuster_46 + 1

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51: Changeling_46
52: Iwokeuplikedis_50
53: BobSwaget_45
54: NothingSpecial_45
55: BiancaTm92_47
56: Jaan_47
57: Trooper_48
58: TipsytheTRex_44
59: Anselm_48
60: Tristan_46
61: ArcherNM_43
62: Adzzy_49 + 1
63: LadyBird_51
64: Loser_49
65: Pukovnik_46
66: IronMan_47
67: Trixie_45
68: Odin_46
69: MissWhite_46
70: KingCyrus_49
71: Serenity_47
72: TarsusIV_45
73: Kinmap_44
74: Relief_45 + 94
75: Morpher26_45 + 11
76: Datway_45
77: Deano_45
78: Stink_46 + 2
79: BangNhom_47 + 6
80: Wander_46 + 18
81: Noelle_46
82: Cindaradix_43
83: DirtyDunning_45 + 1
84: LochMonster_47 + 3
85: Mundrea_45
86: Arturo_45 + 1
87: Shygu2_45
88: Stasia_45
89: Lilbunny_48 + 15
90: Isphiwo_47 + 16
91: Koko_50
92: Yokuri_49 + 2
93: Jordennis_48 + 1
94: Blinn1_51
95: PP_50

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 347132 Report

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

Pham number 347132 has 360 members, 20 are drafts.

Phages represented in each track:
• Track 1 : DustyMartin_49, Shapes_49, Rowdy_49, RhynO_46
• Track 2 : Drake94_43, Trike_43, Poompha_44, Severus_43, PeaceMeal1_43, KittenMittens_42
• Track 3 : OKCentral2016_44, Chupacabra_44, Goose_45
• Track 4 : Eaglepride_46
• Track 5 : Edison31_44
• Track 6 : Bachome_49, Sham4_47, Wolpertinger_46, Orange_47, Insomnia_48, Snape_47, Mabel_47, TinyTimmy_47, Munch_48, Et2Brutus_46, Fibonacci_47, Bud_47, Lucivia_48, Bowtie_48, Mulciber_47, MaCh_48, Petersenfast_47, Gilberta_48, Timothy_47, Aneem_48, Kimba_47, Hutc2_47, Ebony_47, Jabith_48, Flaverint_48, Salz_46, Joselito_48
• Track 7 : Saskia_48
• Track 8 : 40AC_48
• Track 9 : Kimona_46
• Track 10 : HippoHollow_47, Echild_47, LionsBait_47, Benvolio_44
• Track 11 : SwirlSquare_50
• Track 12 : Bugsy_49, Baehexic_46, Updawg_48, WideWale_48, Centaur_48, Terrific_48, NaSiaTalie_47, Flare16_47, Gratitude_48, MiculUcigas_47, Sknot_47, Equemioh13_48
• Track 13 : Smeagan_50, Leviathan_49
• Track 14 : Crucio_47, Dignity_49, SweetiePie_47, Turbido_48, SemperFi_48, Retro23_48, Georgie2_48, Dalmatian_48, Jerm_49
• Track 15 : Malec_47, Larenn_46
• Track 16 : ForesterFrank_46
• Track 17 : JoshKayV_49, CRB1_50
• Track 18 : RedRock_49, AnnaL29_49
• Track 19 : Acolyte_43
• Track 20 : DBQu4n_49, Pomar16_49, Travvers_49, Tomathan_49, Kerberos_49, Duplo_49, StarStuff_49
• Track 21 : Miko_44, Rachaly_46
• Track 22 : DudeLittle_46
• Track 23 : Jsquared_45
• Track 24 : Kalpine_45, Colin_46
• Track 25 : D29_46, Naji_49, D32_49
• Track 26 : QueenB2_46, Fameo_47, Heffalump_46
• Track 27 : Piro94_47, HarryHoudini_48, Drake55_49
• Track 28 : EZMoney23_45

• Track 29 : Leogania_47
• Track 30 : Quokka_45, Bradman_46, MajorMajor_46
• Track 31 : Landor_47
• Track 32 : WeiHuaDA_47
• Track 33 : Koduck_48, L5_46
• Track 34 : GaugeLDP_45
• Track 35 : Deloris_47, VA6_47, AN3_49, BengiVuitton_48
• Track 36 : C3_45, AN9_50, VC3_50, ANI8_50
• Track 37 : Che12_49
• Track 38 : BabyBack_46
• Track 39 : ChipMunk_49
• Track 40 : Prudy_46
• Track 41 : DeerParkTS_45
• Track 42 : 20ES_49, First_0048
• Track 43 : Lokk_46
• Track 44 : FiringLine_47, Power_46, QueenBeesly_47, SnapTap_47
• Track 45 : Herbertwm_47
• Track 46 : LilTurb_48, Whabigail7_48, Agape74_49, AbbyPaige_49
• Track 47 : Journey13_41
• Track 48 : EvilGenius_49
• Track 49 : Caraxes_46, Superchunk_46
• Track 50 : Bactobuster_46, Phaded_48
• Track 51 : Changeling_46
• Track 52 : Iwokeuplikedis_50
• Track 53 : BobSwaget_45
• Track 54 : NothingSpecial_45
• Track 55 : BiancaTri92_47
• Track 56 : Jaan_47
• Track 57 : Trooper_48
• Track 58 : TipsytheTRex_44
• Track 59 : Anselm_48
• Track 60 : Tristan_46
• Track 61 : ArcherNM_43
• Track 62 : Adzzy_49, Ph8s_49
• Track 63 : LadyBird_51
• Track 64 : Loser_49
• Track 65 : Pukovnik_46
• Track 66 : IronMan_47
• Track 67 : Trixie_45
• Track 68 : Odin_46
• Track 69 : MissWhite_46
• Track 70 : KingCyrus_49
• Track 71 : Serenity_47
• Track 72 : TarsusIV_45
• Track 73 : Kinmap_44
• Track 74 : Relief_45, KekoraPapaka_46, Sultana_46, Melvin_48, HamSlice_45, RockieBear_46, Jaykayelowell_44, Phelipe_47, Blackmoor_46, Shaka_46, Clarenza_45, Ohfah_47, Annyong_46, Thanksgivukkah_45, Baby16_46, LappelDuVide_46, Tinybot_45, Abdiel_46, Broseidon_46, Koreni_45, Nebs_47, CentreCat_46, Nyxis_46, Lemur_46, Morrow_47, JetBlade_46, SteMason_45, Iracema64_47, Polymorphads_47, Iceman_46, Junimo_45, Sparxx_47, Pumbaa_46, BubbleTrouble_45, Kingmustik0402_46, Skadoosh_47, TinaFeyge_46, LeoAvram_46, Florean_46, MeeZee_46, PeterPeter_46, Spino_45, Dhanush_46,

Bombshell_46, Pipcraft_44, NorthStar_45, Ruin_46, Maxo_47, Cintron_45, Alberto7_47, Connomayer_46, KFPoly_45, Peaches_46, Eros_46, LittleGuy_46, Scamp_46, Holli_45, Citius_46, Eapen_46, Palestino_45, Phontbonne_46, Kampy_46, OKaNui_46, Buckaroo_45, ICleared_46, Rocksand_46, Ulysses_45, Chaph_46, TygerBlood_46, TroyPia_47, Millski_45, Caelakin_46, LittleB_46, Medusa_46, Koan_44, Sabertooth_46, Wizard007_46, Bartimeaus_46, Skipitt_45, Lunsford_47, Druantia_46, Eurydice_47, Burger_44, Happiness_45, Roosevelt_45, Albee_46, Flux_46, Eris_45, Eagle_46, Commander_46, TiroTheta9_46, Lorenzo_46, Northrop_46, YoSam321_46, Taquarus_46
• Track 75 : Morpher26_45, Cici_45, Xena_44, Perplexer_45, Achebe_44, Badger_44, Bumblebee11_44, AbbysRanger_45, Backyardigan_44, PetiteSangsue_45, Wile_45, Katalie136_45
• Track 76 : Datway_45
• Track 77 : Deano_45
• Track 78 : Stink_46, AvatarAhPeg_45, Miramae_45
• Track 79 : BangNhom_47, SheldonCooper_48, Kremtemulon_46, LHTSCC_48, Obama12_47, ChampagnePapi_48, Cerulean_47
• Track 80 : Wander_46, Huxley_45, Cocoaberry_46, Gadost_46, Avle17_46, NotAPhaseMom_46, Bruiser_45, Houdini22_46, Nemo27_46, BellusTerra_47, Mazhar510_46, Camperdownii_44, Kyee_46, Funston_45, SenorClean_46, JoongJeon_45, Mayonnaise_45, Phacado_46, Maverick_46
• Track 81 : Noelle_46
• Track 82 : Cindaradix_43
• Track 83 : DirtyDunning_45, Phighter1804_46
• Track 84 : LochMonster_47, Rosa24_45, Romney_46, Wilbur_46
• Track 85 : Mundrea_45
• Track 86 : Arturo_45, Kratark_46
• Track 87 : Shygu2_45
• Track 88 : Stasia_45
• Track 89 : Lilbunny_48, Wiks_48, Blue7_51, Tucker_49, Helmet_51, Zaka_49, BlessJoy_50, Gruunaga_49, ToneTone_46, Indra_52, Zulu_49, Jeffabunny_49, WunderPhul_49, Temprado_50, Hammer_50, Rifter_50
• Track 90 : Isiphiwo_47, Gladiator_47, Newrala_49, Chartreuse_48, DaVinci_48, DelvinSonDorr_47, SuperCallie99_48, McFly_49, Roksolana_50, Polyphemus_50, Artemis2UCLA_49, GreedyLawyer_49, Cookiedough_49, CloudWang3_49, Imbriano_50, SuperAwesome_49, Pmask_49
• Track 91 : Koko_50
• Track 92 : Yokurt_49, Garak_51, Hexamo_49
• Track 93 : Jordennis_48, Priamo_50
• Track 94 : Blinn1_51
• Track 95 : PP_50

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

The start number called the most often in the published annotations is 45, it was called in 144 of the 340 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• AbbysRanger_45, Abdiel_46, Achebe_44, Albee_46, Alberto7_47, Annyong_46, Arturo_45, AvatarAhPeg_45, Avle17_46, Baby16_46, Backyardigan_44, Badger_44,

BangNhom_47, Bartimeaus_46, BellusTerra_47, Blackmoor_46, Bombshell_46, Broseidon_46, Bruiser_45, BubbleTrouble_45, Buckaroo_45, Bumblebee11_44, Burger_44, Caelakin_46, Camperdownii_44, CentreCat_46, Cerulean_47, ChampagnePapi_48, Chaph_46, Cici_45, Cindaradix_43, Cintron_45, Citius_46, Clarenza_45, Cocoaberry_46, Commander_46, Connomayer_46, Datway_45, Deano_45, Dhanush_46, DirtyDunning_45, Druantia_46, Eagle_46, Eapen_46, Eris_45, Eros_46, Eurydice_47, Florean_46, Flux_46, Funston_45, Gadost_46, HamSlice_45, Happiness_45, Holli_45, Houdini22_46, Huxley_45, ICleared_46, Iceman_46, Iracema64_47, Jaykayelowell_44, JetBlade_46, JoongJeon_45, Junimo_45, KFPoly_45, Kampy_46, Katalie136_45, KekoraPapaka_46, Kingmustik0402_46, Koan_44, Koreni_45, Kratark_46, Kremtemulon_46, Kyee_46, LHTSCC_48, LappelDuVide_46, Lemur_46, LeoAvram_46, LittleB_46, LittleGuy_46, LochMonster_47, Lorenzo_46, Lunsford_47, Maverick_46, Maxo_47, Mayonnaise_45, Mazhar510_46, Medusa_46, MeeZee_46, Melvin_48, Millski_45, Miramae_45, Morpher26_45, Morrow_47, Mundrea_45, Nebs_47, Nemo27_46, Noelle_46, NorthStar_45, Northrop_46, NotAPhaseMom_46, Nyxis_46, OKaNui_46, Obama12_47, Ohfah_47, Palestino_45, Peaches_46, Perplexer_45, PeterPeter_46, PetiteSangsue_45, Phacado_46, Phelipe_47, Phighter1804_46, Phontbonne_46, Pipcraft_44, Polymorphads_47, Pumbaa_46, Relief_45, RockieBear_46, Rocksand_46, Romney_46, Roosevelt_45, Rosa24_45, Ruin_46, Sabertooth_46, Scamp_46, SenorClean_46, Shaka_46, SheldonCooper_48, Shygu2_45, Skadoosh_47, Skipitt_45, Sparxx_47, Spino_45, Stasia_45, SteMason_45, Stink_46, Sultana_46, Taquarus_46, Thanksgivukkah_45, TinaFeyge_46, Tinybot_45, TiroTheta9_46, TroyPia_47, TygerBlood_46, Ulysses_45, Wander_46, Wilbur_46, Wile_45, Wizard007_46, Xena_44, YoSam321_46,

Genes that have the "Most Annotated" start but do not call it:
• AN9_50, ANI8_50, BobSwaget_45, Bradman_46, C3_45, ChipMunk_49, D29_46, D32_49, DBQu4n_49, Duplo_49, EvilGenius_49, Jsquared_45, Kerberos_49, KingCyrus_49, Koduck_48, L5_46, Lokk_46, MajorMajor_46, Miko_44, Naji_49, Pomar16_49, Quokka_45, Rachaly_46, StarStuff_49, TarsusIV_45, Tomathan_49, Travvers_49, VC3_50, WeiHuaDA_47,

Genes that do not have the "Most Annotated" start:
• 20ES_49, 40AC_48, AN3_49, AbbyPaige_49, Acolyte_43, Adzzy_49, Agape74_49, Aneem_48, AnnaL29_49, Anselm_48, ArcherNM_43, Artemis2UCLA_49, BabyBack_46, Bachome_49, Bactobuster_46, Baehexic_46, BengiVuitton_48, Benvolio_44, BiancaTri92_47, BlessJoy_50, Blinn1_51, Blue7_51, Bowtie_48, Bud_47, Bugsy_49, CRB1_50, Caraxes_46, Centaur_48, Changeling_46, Chartreuse_48, Che12_49, Chupacabra_44, CloudWang3_49, Colin_46, Cookiedough_49, Crucio_47, DaVinci_48, Dalmatian_48, DeerParkTS_45, Deloris_47, DelvinSonDorr_47, Dignity_49, Drake55_49, Drake94_43, DudeLittle_46, DustyMartin_49, EZMoney23_45, Eaglepride_46, Ebony_47, Echild_47, Edison31_44, Equemioh13_48, Et2Brutus_46, Fameo_47, Fibonacci_47, FiringLine_47, First_0048, Flare16_47, Flaverint_48, ForesterFrank_46, Garak_51, GaugeLDP_45, Georgie2_48, Gilberta_48, Gladiator_47, Goose_45, Gratitude_48, GreedyLawyer_49, Gruunaga_49, Hammer_50, HarryHoudini_48, Heffalump_46, Helmet_51, Herbertwm_47, Hexamo_49, HippoHollow_47, Hutc2_47, Imbriano_50, Indra_52, Insomnia_48, IronMan_47, Isiphiwo_47, Iwokeuplikedis_50, Jaan_47, Jabith_48, Jeffabunny_49, Jerm_49, Jordennis_48, Joselito_48, JoshKayV_49, Journey13_41, Kalpine_45, Kimba_47, Kimona_46, Kinmap_44, KittenMittens_42, Koko_50, LadyBird_51, Landor_47, Larenn_46, Leogania_47, Leviathan_49, LilTurb_48, Lilbunny_48, LionsBait_47, Loser_49, Lucivia_48, MaCh_48, Mabel_47,

Malec_47, McFly_49, MiculUcigas_47, MissWhite_46, Mulciber_47, Munch_48, NaSiaTalie_47, Newrala_49, NothingSpecial_45, OKCentral2016_44, Odin_46, Orange_47, PP_50, PeaceMeal1_43, Petersenfast_47, Ph8s_49, Phaded_48, Piro94_47, Pmask_49, Polyphemus_50, Poompha_44, Power_46, Priamo_50, Prudy_46, Pukovnik_46, QueenB2_46, QueenBeesly_47, RedRock_49, Retro23_48, RhynO_46, Rifter_50, Roksolana_50, Rowdy_49, Salz_46, Saskia_48, SemperFi_48, Serenity_47, Severus_43, Sham4_47, Shapes_49, Sknot_47, Smeagan_50, SnapTap_47, Snape_47, SuperAwesome_49, SuperCallie99_48, Superchunk_46, SweetiePie_47, SwirlSquare_50, Temprado_50, Terrific_48, Timothy_47, TinyTimmy_47, TipsytheTRex_44, ToneTone_46, Trike_43, Tristan_46, Trixie_45, Trooper_48, Tucker_49, Turbido_48, Updawg_48, VA6_47, Whabigail7_48, WideWale_48, Wiks_48, Wolpertinger_46, WunderPhul_49, Yokurt_49, Zaka_49, Zulu_49,

Summary by start number:

Start 6:
• Found in 2 of 360 (0.6%) of genes in pham
• Manual Annotations of this start: 2 of 340
• Called 100.0% of time when present
• Phage (with cluster) where this start called: BobSwaget_45 (A2), Lokk_46 (A2),

Start 9:
• Found in 41 of 360 (11.4%) of genes in pham
• Manual Annotations of this start: 3 of 340
• Called 9.8% of time when present
• Phage (with cluster) where this start called: Blinn1_51 (A6), Garak_51 (A6), Hexamo_49 (A6), Yokurt_49 (A6),

Start 10:
• Found in 2 of 360 (0.6%) of genes in pham
• Manual Annotations of this start: 2 of 340
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Koduck_48 (A2), L5_46 (A2),

Start 12:
• Found in 55 of 360 (15.3%) of genes in pham
• Manual Annotations of this start: 51 of 340
• Called 98.2% of time when present
• Phage (with cluster) where this start called: 20ES_49 (A2), AN3_49 (A2), AbbyPaige_49 (A2), Agape74_49 (A2), AnnaL29_49 (A2), BengiVuitton_48 (A2), Benvolio_44 (A2), BiancaTri92_47 (A2), CRB1_50 (A2), ChipMunk_49 (A2), Crucio_47 (A2), Dalmatian_48 (A2), Deloris_47 (A2), Dignity_49 (A2), Drake55_49 (A2), DudeLittle_46 (A2), Echild_47 (A2), EvilGenius_49 (A2), Fameo_47 (A2), FiringLine_47 (A2), First_0048 (A2), Georgie2_48 (A2), HarryHoudini_48 (A2), Heffalump_46 (A2), HippoHollow_47 (A2), Jerm_49 (A2), JoshKayV_49 (A2), KingCyrus_49 (A2), LadyBird_51 (A2), Larenn_46 (A2), Leogania_47 (A2), Leviathan_49 (A2), LilTurb_48 (A2), LionsBait_47 (A2), Loser_49 (A2), Malec_47 (A2), Miko_44 (A2), Piro94_47 (A2), Power_46 (A2), Prudy_46 (A2), QueenB2_46 (A2), QueenBeesly_47 (A2), Rachaly_46 (A2), RedRock_49 (A2), Retro23_48 (A2), SemperFi_48 (A2), Smeagan_50 (A2), SnapTap_47 (A2), SweetiePie_47 (A2), TarsusIV_45 (A2), Trooper_48 (A2), Turbido_48 (A2), VA6_47 (A2), Whabigail7_48 (A2),

Start 13:
• Found in 7 of 360 (1.9%) of genes in pham
• Manual Annotations of this start: 7 of 340
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Bactobuster_46 (A2), IronMan_47 (A2), Jaan_47 (A2), Landor_47 (A2), Phaded_48 (A2), Pukovnik_46 (A2), Tristan_46 (A2),

Start 14:
• Found in 7 of 360 (1.9%) of genes in pham
• Manual Annotations of this start: 7 of 340
• Called 100.0% of time when present
• Phage (with cluster) where this start called: AN9_50 (A2), ANI8_50 (A2), BabyBack_46 (A2), C3_45 (A2), GaugeLDP_45 (A2), Trixie_45 (A2), VC3_50 (A2),

Start 15:
• Found in 142 of 360 (39.4%) of genes in pham
• Manual Annotations of this start: 81 of 340
• Called 61.3% of time when present
• Phage (with cluster) where this start called: 40AC_48 (A17), Acolyte_43 (A2), Adzzy_49 (A2), Anselm_48 (A2), ArcherNM_43 (A2), Artemis2UCLA_49 (A6), Baehexic_46 (A2), BlessJoy_50 (A6), Blue7_51 (A6), Bradman_46 (A2), Bugsy_49 (A2), Caraxes_46 (A2), Centaur_48 (A2), Changeling_46 (A2), Chartreuse_48 (A6), Che12_49 (A2), CloudWang3_49 (A6), Colin_46 (A2), Cookiedough_49 (A6), D29_46 (A2), D32_49 (A2), DBQu4n_49 (A2), DaVinci_48 (A6), DeerParkTS_45 (A2), DelvinSonDorr_47 (A6), Duplo_49 (A2), EZMoney23_45 (A2), Equemioh13_48 (A2), Flare16_47 (A2), ForesterFrank_46 (A2), Gladiator_47 (A6), Gratitude_48 (A2), GreedyLawyer_49 (A6), Gruunaga_49 (A6), Hammer_50 (A6), Helmet_51 (A6), Herbertwm_47 (A2), Imbriano_50 (A6), Indra_52 (A6), Isiphiwo_47 (A6), Iwokeuplikedis_50 (A2), Jeffabunny_49 (A6), Jordennis_48 (A6), Jsquared_45 (A2), Kalpine_45 (A2), Kerberos_49 (A2), Kimona_46 (A19), Kinmap_44 (A21), Koko_50 (A6), Lilbunny_48 (A6), MajorMajor_46 (A2), McFly_49 (A6), MiculUcigas_47 (A2), NaSiaTalie_47 (A2), Naji_49 (A2), Newrala_49 (A6), NothingSpecial_45 (A2), Odin_46 (A2), Ph8s_49 (A2), Pmask_49 (A6), Polyphemus_50 (A6), Pomar16_49 (A2), Priamo_50 (A6), Quokka_45 (A2), Rifter_50 (A6), Roksolana_50 (A6), Serenity_47 (A2), Sknot_47 (A2), StarStuff_49 (A2), SuperAwesome_49 (A6), SuperCallie99_48 (A6), Superchunk_46 (A2), SwirlSquare_50 (A2), Temprado_50 (A6), Terrific_48 (A2), TipsytheTRex_44 (A2), Tomathan_49 (A2), ToneTone_46 (A6), Travvers_49 (A2), Tucker_49 (A6), Updawg_48 (A2), WeiHuaDA_47 (A2), WideWale_48 (A2), Wiks_48 (A6), WunderPhul_49 (A6), Zaka_49 (A6), Zulu_49 (A6),

Start 16:
• Found in 2 of 360 (0.6%) of genes in pham
• Manual Annotations of this start: 1 of 340
• Called 50.0% of time when present
• Phage (with cluster) where this start called: PP_50 (A7),

Start 25:
• Found in 29 of 360 (8.1%) of genes in pham
• Manual Annotations of this start: 28 of 340
• Called 96.6% of time when present
• Phage (with cluster) where this start called: Aneem_48 (A11), Bachome_49 (A11), Bowtie_48 (A11), Bud_47 (A11), Ebony_47 (A11), Et2Brutus_46 (A11), Fibonacci_47

(A11), Flaverint_48 (A11), Gilberta_48 (A11), Hutc2_47 (A11), Insomnia_48 (A11), Jabith_48 (A11), Joselito_48 (A11), Kimba_47 (A11), Lucivia_48 (A11), MaCh_48 (A11), Mabel_47 (A11), Mulciber_47 (A11), Munch_48 (A11), Orange_47 (A11), Petersenfast_47 (A11), Salz_46 (A11), Saskia_48 (A11), Sham4_47 (A11), Snape_47 (A11), Timothy_47 (A11), TinyTimmy_47 (A11), Wolpertinger_46 (A11),

Start 27:
• Found in 36 of 360 (10.0%) of genes in pham
• Manual Annotations of this start: 1 of 340
• Called 2.8% of time when present
• Phage (with cluster) where this start called: Journey13_41 (A2),

Start 28:
• Found in 2 of 360 (0.6%) of genes in pham
• Manual Annotations of this start: 1 of 340
• Called 50.0% of time when present
• Phage (with cluster) where this start called: MissWhite_46 (A2),

Start 36:
• Found in 2 of 360 (0.6%) of genes in pham
• Manual Annotations of this start: 1 of 340
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Eaglepride_46 (A10),

Start 38:
• Found in 14 of 360 (3.9%) of genes in pham
• Manual Annotations of this start: 11 of 340
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Chupacabra_44 (A10), Drake94_43 (A10), DustyMartin_49 (A10), Edison31_44 (A10), Goose_45 (A10), KittenMittens_42 (A10), OKCentral2016_44 (A10), PeaceMeal1_43 (A10), Poompha_44 (A10), RhynO_46 (A10), Rowdy_49 (A10), Severus_43 (A10), Shapes_49 (A10), Trike_43 (A10),

Start 45:
• Found in 180 of 360 (50.0%) of genes in pham
• Manual Annotations of this start: 144 of 340
• Called 83.9% of time when present
• Phage (with cluster) where this start called: AbbysRanger_45 (A4), Abdiel_46 (A4), Achebe_44 (A4), Albee_46 (A4), Alberto7_47 (A4), Annyong_46 (A4), Arturo_45 (A4), AvatarAhPeg_45 (A4), Avle17_46 (A4), Baby16_46 (A4), Backyardigan_44 (A4), Badger_44 (A4), BangNhom_47 (A4), Bartimeaus_46 (A4), BellusTerra_47 (A4), Blackmoor_46 (A4), Bombshell_46 (A4), Broseidon_46 (A4), Bruiser_45 (A4), BubbleTrouble_45 (A4), Buckaroo_45 (A4), Bumblebee11_44 (A4), Burger_44 (A4), Caelakin_46 (A4), Camperdownii_44 (A4), CentreCat_46 (A4), Cerulean_47 (A4), ChampagnePapi_48 (A4), Chaph_46 (A4), Cici_45 (A4), Cindaradix_43 (A4), Cintron_45 (A4), Citius_46 (A4), Clarenza_45 (A4), Cocoaberry_46 (A4), Commander_46 (A4), Connomayer_46 (A4), Datway_45 (A4), Deano_45 (A4), Dhanush_46 (A4), DirtyDunning_45 (A4), Druantia_46 (A4), Eagle_46 (A4), Eapen_46 (A4), Eris_45 (A4), Eros_46 (A4), Eurydice_47 (A4), Florean_46 (A4), Flux_46 (A4), Funston_45 (A4), Gadost_46 (A4), HamSlice_45 (A4), Happiness_45 (A4), Holli_45 (A4), Houdini22_46 (A4), Huxley_45 (A4), ICleared_46 (A4), Iceman_46 (A4), Iracema64_47 (A4), Jaykayelowell_44 (A4), JetBlade_46 (A4),

JoongJeon_45 (A4), Junimo_45 (A4), KFPoly_45 (A4), Kampy_46 (A4), Katalie136_45 (A4), KekoraPapaka_46 (A4), Kingmustik0402_46 (A4), Koan_44 (A4), Koreni_45 (A4), Kratark_46 (A4), Kremtemulon_46 (A4), Kyee_46 (A4), LHTSCC_48 (A4), LappelDuVide_46 (A4), Lemur_46 (A4), LeoAvram_46 (A4), LittleB_46 (A4), LittleGuy_46 (A4), LochMonster_47 (A4), Lorenzo_46 (A4), Lunsford_47 (A4), Maverick_46 (A4), Maxo_47 (A4), Mayonnaise_45 (A4), Mazhar510_46 (A4), Medusa_46 (A4), MeeZee_46 (A4), Melvin_48 (A4), Millski_45 (A4), Miramae_45 (A4), Morpher26_45 (A4), Morrow_47 (A4), Mundrea_45 (A4), Nebs_47 (A4), Nemo27_46 (A4), Noelle_46 (A4), NorthStar_45 (A4), Northrop_46 (A4), NotAPhaseMom_46 (A4), Nyxis_46 (A4), OKaNui_46 (A4), Obama12_47 (A4), Ohfah_47 (A4), Palestino_45 (A4), Peaches_46 (A4), Perplexer_45 (A4), PeterPeter_46 (A4), PetiteSangsue_45 (A4), Phacado_46 (A4), Phelipe_47 (A4), Phighter1804_46 (A4), Phontbonne_46 (A4), Pipcraft_44 (A4), Polymorphads_47 (A4), Pumbaa_46 (A4), Relief_45 (A4), RockieBear_46 (A4), Rocksand_46 (A4), Romney_46 (A4), Roosevelt_45 (A4), Rosa24_45 (A4), Ruin_46 (A4), Sabertooth_46 (A4), Scamp_46 (A4), SenorClean_46 (A4), Shaka_46 (A4), SheldonCooper_48 (A4), Shygu2_45 (A4), Skadoosh_47 (A4), Skipitt_45 (A4), Sparxx_47 (A4), Spino_45 (A4), Stasia_45 (A4), SteMason_45 (A4), Stink_46 (A4), Sultana_46 (A4), Taquarus_46 (A4), Thanksgivukkah_45 (A4), TinaFeyge_46 (A4), Tinybot_45 (A4), TiroTheta9_46 (A4), TroyPia_47 (A4), TygerBlood_46 (A4), Ulysses_45 (A4), Wander_46 (A4), Wilbur_46 (A4), Wile_45 (A4), Wizard007_46 (A4), Xena_44 (A4), YoSam321_46 (A4),

Summary by clusters:

There are 9 clusters represented in this pham: A21, A17, A11, A10, A19, A2, A4, A7, A6,

Info for manual annotations of cluster A10:
•Start number 36 was manually annotated 1 time for cluster A10.
•Start number 38 was manually annotated 11 times for cluster A10.

Info for manual annotations of cluster A11:
•Start number 25 was manually annotated 28 times for cluster A11.

Info for manual annotations of cluster A19:
•Start number 15 was manually annotated 1 time for cluster A19.

Info for manual annotations of cluster A2:
•Start number 6 was manually annotated 2 times for cluster A2.
•Start number 10 was manually annotated 2 times for cluster A2.
•Start number 12 was manually annotated 51 times for cluster A2.
•Start number 13 was manually annotated 7 times for cluster A2.
•Start number 14 was manually annotated 7 times for cluster A2.
•Start number 15 was manually annotated 44 times for cluster A2.
•Start number 27 was manually annotated 1 time for cluster A2.
•Start number 28 was manually annotated 1 time for cluster A2.

Info for manual annotations of cluster A21:
•Start number 15 was manually annotated 1 time for cluster A21.

Info for manual annotations of cluster A4:

•Start number 45 was manually annotated 144 times for cluster A4.

Info for manual annotations of cluster A6:
•Start number 9 was manually annotated 3 times for cluster A6.
•Start number 15 was manually annotated 35 times for cluster A6.

Info for manual annotations of cluster A7:
•Start number 16 was manually annotated 1 time for cluster A7.

Gene Information:

Gene: 20ES_49 Start: 32435, Stop: 32013, Start Num: 12
Candidate Starts for 20ES_49:
(Start: 12 @32435 has 51 MA's), (Start: 15 @32426 has 81 MA's), (80, 32060),

Gene: 40AC_48 Start: 33450, Stop: 33055, Start Num: 15
Candidate Starts for 40AC_48:
(Start: 15 @33450 has 81 MA's), (Start: 27 @33372 has 1 MA's), (35, 33354), (72, 33225), (80, 33102),

Gene: AN3_49 Start: 32806, Stop: 32393, Start Num: 12
Candidate Starts for AN3_49:
(Start: 12 @32806 has 51 MA's), (29, 32716), (37, 32707), (49, 32671), (62, 32605), (80, 32440),

Gene: AN9_50 Start: 32346, Stop: 31912, Start Num: 14
Candidate Starts for AN9_50:
(Start: 14 @32346 has 7 MA's), (Start: 15 @32343 has 81 MA's), (30, 32244), (Start: 45 @32202 has 144 MA's), (52, 32178), (73, 32079), (78, 31992), (80, 31959),

Gene: ANI8_50 Start: 32346, Stop: 31912, Start Num: 14
Candidate Starts for ANI8_50:
(Start: 14 @32346 has 7 MA's), (Start: 15 @32343 has 81 MA's), (30, 32244), (Start: 45 @32202 has 144 MA's), (52, 32178), (73, 32079), (78, 31992), (80, 31959),

Gene: AbbyPaige_49 Start: 32616, Stop: 32194, Start Num: 12
Candidate Starts for AbbyPaige_49:
(Start: 12 @32616 has 51 MA's), (Start: 15 @32607 has 81 MA's), (32, 32514), (37, 32508), (80, 32241),

Gene: AbbysRanger_45 Start: 31867, Stop: 31544, Start Num: 45
Candidate Starts for AbbysRanger_45:
(Start: 45 @31867 has 144 MA's), (64, 31768), (65, 31759), (67, 31744), (73, 31714), (80, 31594),

Gene: Abdiel_46 Start: 31881, Stop: 31579, Start Num: 45
Candidate Starts for Abdiel_46:
(5, 32151), (Start: 45 @31881 has 144 MA's), (73, 31749), (74, 31710), (78, 31662), (80, 31629),

Gene: Achebe_44 Start: 31850, Stop: 31527, Start Num: 45
Candidate Starts for Achebe_44:
(Start: 45 @31850 has 144 MA's), (64, 31751), (65, 31742), (67, 31727), (73, 31697), (80, 31577),

Gene: Acolyte_43 Start: 31589, Stop: 31182, Start Num: 15

Candidate Starts for Acolyte_43:
(Start: 15 @31589 has 81 MA's), (24, 31532), (34, 31484), (69, 31358), (80, 31229),

Gene: Adzzy_49 Start: 31071, Stop: 30643, Start Num: 15
Candidate Starts for Adzzy_49:
(8, 31107), (Start: 15 @31071 has 81 MA's), (78, 30723), (80, 30690),

Gene: Agape74_49 Start: 32601, Stop: 32179, Start Num: 12
Candidate Starts for Agape74_49:
(Start: 12 @32601 has 51 MA's), (Start: 15 @32592 has 81 MA's), (32, 32499), (37, 32493), (80, 32226),

Gene: Albee_46 Start: 31880, Stop: 31578, Start Num: 45
Candidate Starts for Albee_46:
(5, 32150), (Start: 45 @31880 has 144 MA's), (73, 31748), (74, 31709), (78, 31661), (80, 31628),

Gene: Alberto7_47 Start: 32217, Stop: 31915, Start Num: 45
Candidate Starts for Alberto7_47:
(5, 32487), (Start: 45 @32217 has 144 MA's), (73, 32085), (74, 32046), (78, 31998), (80, 31965),

Gene: Aneem_48 Start: 31705, Stop: 31358, Start Num: 25
Candidate Starts for Aneem_48:
(Start: 25 @31705 has 28 MA's), (33, 31672), (44, 31651), (78, 31438), (80, 31405),

Gene: AnnaL29_49 Start: 33146, Stop: 32724, Start Num: 12
Candidate Starts for AnnaL29_49:
(Start: 12 @33146 has 51 MA's), (Start: 15 @33137 has 81 MA's), (24, 33080), (32, 33044), (80, 32771),

Gene: Annyong_46 Start: 31925, Stop: 31623, Start Num: 45
Candidate Starts for Annyong_46:
(5, 32195), (Start: 45 @31925 has 144 MA's), (73, 31793), (74, 31754), (78, 31706), (80, 31673),

Gene: Anselm_48 Start: 32523, Stop: 32110, Start Num: 15
Candidate Starts for Anselm_48:
(Start: 12 @32532 has 51 MA's), (Start: 15 @32523 has 81 MA's), (20, 32487), (Start: 27 @32445 has 1 MA's), (80, 32157),

Gene: ArcherNM_43 Start: 32185, Stop: 31778, Start Num: 15
Candidate Starts for ArcherNM_43:
(Start: 15 @32185 has 81 MA's), (Start: 27 @32107 has 1 MA's), (35, 32089), (66, 31972), (80, 31825), (83, 31798),

Gene: Artemis2UCLA_49 Start: 30834, Stop: 30406, Start Num: 15
Candidate Starts for Artemis2UCLA_49:
(Start: 9 @30861 has 3 MA's), (Start: 15 @30834 has 81 MA's), (30, 30738), (43, 30702), (63, 30612), (68, 30585), (69, 30582), (83, 30426),

Gene: Arturo_45 Start: 32157, Stop: 31834, Start Num: 45
Candidate Starts for Arturo_45:
(Start: 45 @32157 has 144 MA's), (49, 32142), (73, 32004), (78, 31917), (80, 31884),

Gene: AvatarAhPeg_45 Start: 32379, Stop: 32056, Start Num: 45

Candidate Starts for AvatarAhPeg_45:
(Start: 45 @32379 has 144 MA's), (49, 32364), (65, 32271), (67, 32256), (73, 32226), (77, 32151), (80, 32106),

Gene: Avle17_46 Start: 31877, Stop: 31575, Start Num: 45
Candidate Starts for Avle17_46:
(Start: 45 @31877 has 144 MA's), (73, 31745), (74, 31706), (78, 31658), (80, 31625),

Gene: Baby16_46 Start: 31891, Stop: 31589, Start Num: 45
Candidate Starts for Baby16_46:
(5, 32161), (Start: 45 @31891 has 144 MA's), (73, 31759), (74, 31720), (78, 31672), (80, 31639),

Gene: BabyBack_46 Start: 32865, Stop: 32410, Start Num: 14
Candidate Starts for BabyBack_46:
(Start: 14 @32865 has 7 MA's), (17, 32838), (40, 32721), (61, 32625), (69, 32589), (73, 32577), (80, 32457), (83, 32430),

Gene: Bachome_49 Start: 31693, Stop: 31346, Start Num: 25
Candidate Starts for Bachome_49:
(Start: 25 @31693 has 28 MA's), (33, 31660), (44, 31639), (78, 31426), (80, 31393),

Gene: Backyardigan_44 Start: 31883, Stop: 31560, Start Num: 45
Candidate Starts for Backyardigan_44:
(Start: 45 @31883 has 144 MA's), (64, 31784), (65, 31775), (67, 31760), (73, 31730), (80, 31610),

Gene: Bactobuster_46 Start: 33096, Stop: 32677, Start Num: 13
Candidate Starts for Bactobuster_46:
(Start: 13 @33096 has 7 MA's), (Start: 27 @33015 has 1 MA's), (50, 32952), (55, 32934), (66, 32880), (80, 32724),

Gene: Badger_44 Start: 31851, Stop: 31528, Start Num: 45
Candidate Starts for Badger_44:
(Start: 45 @31851 has 144 MA's), (64, 31752), (65, 31743), (67, 31728), (73, 31698), (80, 31578),

Gene: Baehexic_46 Start: 32303, Stop: 31869, Start Num: 15
Candidate Starts for Baehexic_46:
(Start: 15 @32303 has 81 MA's), (31, 32204), (44, 32168), (80, 31916),

Gene: BangNhom_47 Start: 32302, Stop: 32000, Start Num: 45
Candidate Starts for BangNhom_47:
(5, 32572), (Start: 45 @32302 has 144 MA's), (73, 32170), (74, 32131), (80, 32050),

Gene: Bartimeaus_46 Start: 31882, Stop: 31580, Start Num: 45
Candidate Starts for Bartimeaus_46:
(5, 32152), (Start: 45 @31882 has 144 MA's), (73, 31750), (74, 31711), (78, 31663), (80, 31630),

Gene: BellusTerra_47 Start: 31881, Stop: 31579, Start Num: 45
Candidate Starts for BellusTerra_47:
(Start: 45 @31881 has 144 MA's), (73, 31749), (74, 31710), (78, 31662), (80, 31629),

Gene: BengiVuitton_48 Start: 32388, Stop: 31975, Start Num: 12
Candidate Starts for BengiVuitton_48:
(Start: 12 @32388 has 51 MA's), (29, 32298), (37, 32289), (49, 32253), (62, 32187), (80, 32022),

Gene: Benvolio_44 Start: 31563, Stop: 31141, Start Num: 12
Candidate Starts for Benvolio_44:
(Start: 12 @31563 has 51 MA's), (Start: 15 @31554 has 81 MA's), (Start: 27 @31476 has 1 MA's), (80, 31188),

Gene: BiancaTri92_47 Start: 32931, Stop: 32509, Start Num: 12
Candidate Starts for BiancaTri92_47:
(Start: 12 @32931 has 51 MA's), (Start: 15 @32922 has 81 MA's), (Start: 27 @32844 has 1 MA's), (80, 32556),

Gene: Blackmoor_46 Start: 31882, Stop: 31580, Start Num: 45
Candidate Starts for Blackmoor_46:
(5, 32152), (Start: 45 @31882 has 144 MA's), (73, 31750), (74, 31711), (78, 31663), (80, 31630),

Gene: BlessJoy_50 Start: 31295, Stop: 30867, Start Num: 15
Candidate Starts for BlessJoy_50:
(Start: 9 @31322 has 3 MA's), (Start: 15 @31295 has 81 MA's), (30, 31199), (60, 31085), (69, 31043), (83, 30887),

Gene: Blinn1_51 Start: 31121, Stop: 30666, Start Num: 9
Candidate Starts for Blinn1_51:
(Start: 9 @31121 has 3 MA's), (Start: 15 @31094 has 81 MA's), (30, 30998), (43, 30962), (68, 30845), (80, 30713),

Gene: Blue7_51 Start: 30930, Stop: 30502, Start Num: 15
Candidate Starts for Blue7_51:
(Start: 9 @30957 has 3 MA's), (Start: 15 @30930 has 81 MA's), (30, 30834), (60, 30720), (69, 30678), (83, 30522),

Gene: BobSwaget_45 Start: 31896, Stop: 31399, Start Num: 6
Candidate Starts for BobSwaget_45:
(Start: 6 @31896 has 2 MA's), (42, 31704), (Start: 45 @31692 has 144 MA's), (61, 31617), (80, 31446),

Gene: Bombshell_46 Start: 31877, Stop: 31575, Start Num: 45
Candidate Starts for Bombshell_46:
(5, 32147), (Start: 45 @31877 has 144 MA's), (73, 31745), (74, 31706), (78, 31658), (80, 31625),

Gene: Bowtie_48 Start: 31712, Stop: 31365, Start Num: 25
Candidate Starts for Bowtie_48:
(Start: 25 @31712 has 28 MA's), (33, 31679), (44, 31658), (78, 31445), (80, 31412),

Gene: Bradman_46 Start: 31085, Stop: 30678, Start Num: 15
Candidate Starts for Bradman_46:
(Start: 15 @31085 has 81 MA's), (24, 31049), (Start: 45 @30965 has 144 MA's), (78, 30758), (80, 30725),

Gene: Broseidon_46 Start: 31882, Stop: 31580, Start Num: 45
Candidate Starts for Broseidon_46:
(5, 32152), (Start: 45 @31882 has 144 MA's), (73, 31750), (74, 31711), (78, 31663), (80, 31630),

Gene: Bruiser_45 Start: 31880, Stop: 31578, Start Num: 45
Candidate Starts for Bruiser_45:

(Start: 45 @31880 has 144 MA's), (73, 31748), (74, 31709), (78, 31661), (80, 31628),

Gene: BubbleTrouble_45 Start: 31880, Stop: 31578, Start Num: 45
Candidate Starts for BubbleTrouble_45:
(5, 32150), (Start: 45 @31880 has 144 MA's), (73, 31748), (74, 31709), (78, 31661), (80, 31628),

Gene: Buckaroo_45 Start: 31884, Stop: 31582, Start Num: 45
Candidate Starts for Buckaroo_45:
(5, 32154), (Start: 45 @31884 has 144 MA's), (73, 31752), (74, 31713), (78, 31665), (80, 31632),

Gene: Bud_47 Start: 31267, Stop: 30920, Start Num: 25
Candidate Starts for Bud_47:
(Start: 25 @31267 has 28 MA's), (33, 31234), (44, 31213), (78, 31000), (80, 30967),

Gene: Bugsy_49 Start: 32673, Stop: 32239, Start Num: 15
Candidate Starts for Bugsy_49:
(Start: 15 @32673 has 81 MA's), (31, 32574), (44, 32538), (80, 32286),

Gene: Bumblebee11_44 Start: 31853, Stop: 31530, Start Num: 45
Candidate Starts for Bumblebee11_44:
(Start: 45 @31853 has 144 MA's), (64, 31754), (65, 31745), (67, 31730), (73, 31700), (80, 31580),

Gene: Burger_44 Start: 31880, Stop: 31578, Start Num: 45
Candidate Starts for Burger_44:
(5, 32150), (Start: 45 @31880 has 144 MA's), (73, 31748), (74, 31709), (78, 31661), (80, 31628),

Gene: C3_45 Start: 32346, Stop: 31912, Start Num: 14
Candidate Starts for C3_45:
(Start: 14 @32346 has 7 MA's), (Start: 15 @32343 has 81 MA's), (30, 32244), (Start: 45 @32202 has 144 MA's), (52, 32178), (73, 32079), (78, 31992), (80, 31959),

Gene: CRB1_50 Start: 32781, Stop: 32359, Start Num: 12
Candidate Starts for CRB1_50:
(Start: 12 @32781 has 51 MA's), (Start: 15 @32772 has 81 MA's), (32, 32679), (37, 32673), (46, 32649), (47, 32646), (80, 32406),

Gene: Caelakin_46 Start: 31880, Stop: 31578, Start Num: 45
Candidate Starts for Caelakin_46:
(5, 32150), (Start: 45 @31880 has 144 MA's), (73, 31748), (74, 31709), (78, 31661), (80, 31628),

Gene: Camperdownii_44 Start: 31553, Stop: 31251, Start Num: 45
Candidate Starts for Camperdownii_44:
(Start: 45 @31553 has 144 MA's), (73, 31421), (74, 31382), (78, 31334), (80, 31301),

Gene: Caraxes_46 Start: 30723, Stop: 30316, Start Num: 15
Candidate Starts for Caraxes_46:
(Start: 15 @30723 has 81 MA's), (40, 30624), (66, 30510), (78, 30396), (80, 30363),

Gene: Centaur_48 Start: 32520, Stop: 32086, Start Num: 15
Candidate Starts for Centaur_48:
(Start: 15 @32520 has 81 MA's), (31, 32421), (44, 32385), (80, 32133),

Gene: CentreCat_46 Start: 31883, Stop: 31581, Start Num: 45

Candidate Starts for CentreCat_46:
(5, 32153), (Start: 45 @31883 has 144 MA's), (73, 31751), (74, 31712), (78, 31664), (80, 31631),

Gene: Cerulean_47 Start: 32303, Stop: 32001, Start Num: 45
Candidate Starts for Cerulean_47:
(5, 32573), (Start: 45 @32303 has 144 MA's), (73, 32171), (74, 32132), (80, 32051),

Gene: ChampagnePapi_48 Start: 32302, Stop: 32000, Start Num: 45
Candidate Starts for ChampagnePapi_48:
(5, 32572), (Start: 45 @32302 has 144 MA's), (73, 32170), (74, 32131), (80, 32050),

Gene: Changeling_46 Start: 32725, Stop: 32312, Start Num: 15
Candidate Starts for Changeling_46:
(Start: 15 @32725 has 81 MA's), (Start: 27 @32647 has 1 MA's), (46, 32602), (79, 32371), (80, 32359), (83, 32332),

Gene: Chaph_46 Start: 31891, Stop: 31589, Start Num: 45
Candidate Starts for Chaph_46:
(5, 32161), (Start: 45 @31891 has 144 MA's), (73, 31759), (74, 31720), (78, 31672), (80, 31639),

Gene: Chartreuse_48 Start: 30533, Stop: 30105, Start Num: 15
Candidate Starts for Chartreuse_48:
(Start: 9 @30560 has 3 MA's), (Start: 15 @30533 has 81 MA's), (30, 30437), (43, 30401), (63, 30311), (68, 30284), (69, 30281), (83, 30125),

Gene: Che12_49 Start: 31155, Stop: 30727, Start Num: 15
Candidate Starts for Che12_49:
(Start: 15 @31155 has 81 MA's), (39, 31044), (50, 30993), (78, 30807), (80, 30774),

Gene: ChipMunk_49 Start: 33873, Stop: 33451, Start Num: 12
Candidate Starts for ChipMunk_49:
(Start: 12 @33873 has 51 MA's), (32, 33771), (Start: 45 @33744 has 144 MA's), (80, 33498),

Gene: Chupacabra_44 Start: 31467, Stop: 31129, Start Num: 38
Candidate Starts for Chupacabra_44:
(11, 31611), (18, 31560), (Start: 38 @31467 has 11 MA's), (56, 31407), (69, 31317), (72, 31302), (77, 31224),

Gene: Cici_45 Start: 31868, Stop: 31545, Start Num: 45
Candidate Starts for Cici_45:
(Start: 45 @31868 has 144 MA's), (64, 31769), (65, 31760), (67, 31745), (73, 31715), (80, 31595),

Gene: Cindaradix_43 Start: 31493, Stop: 31170, Start Num: 45
Candidate Starts for Cindaradix_43:
(Start: 45 @31493 has 144 MA's), (65, 31385), (73, 31340), (77, 31265), (80, 31220),

Gene: Cintron_45 Start: 31860, Stop: 31558, Start Num: 45
Candidate Starts for Cintron_45:
(5, 32130), (Start: 45 @31860 has 144 MA's), (73, 31728), (74, 31689), (78, 31641), (80, 31608),

Gene: Citius_46 Start: 31901, Stop: 31599, Start Num: 45
Candidate Starts for Citius_46:
(5, 32171), (Start: 45 @31901 has 144 MA's), (73, 31769), (74, 31730), (78, 31682), (80, 31649),

Gene: Clarenza_45 Start: 31877, Stop: 31575, Start Num: 45
Candidate Starts for Clarenza_45:
(5, 32147), (Start: 45 @31877 has 144 MA's), (73, 31745), (74, 31706), (78, 31658), (80, 31625),

Gene: CloudWang3_49 Start: 30934, Stop: 30506, Start Num: 15
Candidate Starts for CloudWang3_49:
(Start: 9 @30961 has 3 MA's), (Start: 15 @30934 has 81 MA's), (30, 30838), (43, 30802), (63, 30712), (68, 30685), (69, 30682), (83, 30526),

Gene: Cocoaberry_46 Start: 31884, Stop: 31582, Start Num: 45
Candidate Starts for Cocoaberry_46:
(Start: 45 @31884 has 144 MA's), (73, 31752), (74, 31713), (78, 31665), (80, 31632),

Gene: Colin_46 Start: 32497, Stop: 32084, Start Num: 15
Candidate Starts for Colin_46:
(Start: 15 @32497 has 81 MA's), (Start: 27 @32419 has 1 MA's), (80, 32131),

Gene: Commander_46 Start: 31879, Stop: 31577, Start Num: 45
Candidate Starts for Commander_46:
(5, 32149), (Start: 45 @31879 has 144 MA's), (73, 31747), (74, 31708), (78, 31660), (80, 31627),

Gene: Connomayer_46 Start: 31880, Stop: 31578, Start Num: 45
Candidate Starts for Connomayer_46:
(5, 32150), (Start: 45 @31880 has 144 MA's), (73, 31748), (74, 31709), (78, 31661), (80, 31628),

Gene: Cookiedough_49 Start: 31149, Stop: 30721, Start Num: 15
Candidate Starts for Cookiedough_49:
(Start: 9 @31176 has 3 MA's), (Start: 15 @31149 has 81 MA's), (30, 31053), (43, 31017), (63, 30927), (68, 30900), (69, 30897), (83, 30741),

Gene: Crucio_47 Start: 32116, Stop: 31694, Start Num: 12
Candidate Starts for Crucio_47:
(Start: 12 @32116 has 51 MA's), (Start: 15 @32107 has 81 MA's), (32, 32014), (46, 31984), (80, 31741),

Gene: D29_46 Start: 31906, Stop: 31496, Start Num: 15
Candidate Starts for D29_46:
(4, 32113), (Start: 15 @31906 has 81 MA's), (Start: 45 @31786 has 144 MA's), (52, 31762), (54, 31756), (73, 31663), (78, 31576), (80, 31543),

Gene: D32_49 Start: 31906, Stop: 31496, Start Num: 15
Candidate Starts for D32_49:
(4, 32113), (Start: 15 @31906 has 81 MA's), (Start: 45 @31786 has 144 MA's), (52, 31762), (54, 31756), (73, 31663), (78, 31576), (80, 31543),

Gene: DBQu4n_49 Start: 31906, Stop: 31496, Start Num: 15
Candidate Starts for DBQu4n_49:
(2, 32233), (3, 32221), (Start: 15 @31906 has 81 MA's), (Start: 45 @31786 has 144 MA's), (52, 31762), (54, 31756), (73, 31663), (78, 31576), (80, 31543),

Gene: DaVinci_48 Start: 30587, Stop: 30159, Start Num: 15
Candidate Starts for DaVinci_48:

(Start: 9 @30614 has 3 MA's), (Start: 15 @30587 has 81 MA's), (30, 30491), (43, 30455), (63, 30365), (68, 30338), (69, 30335), (83, 30179),

Gene: Dalmatian_48 Start: 32508, Stop: 32086, Start Num: 12
Candidate Starts for Dalmatian_48:
(Start: 12 @32508 has 51 MA's), (Start: 15 @32499 has 81 MA's), (32, 32406), (46, 32376), (80, 32133),

Gene: Datway_45 Start: 31839, Stop: 31516, Start Num: 45
Candidate Starts for Datway_45:
(Start: 45 @31839 has 144 MA's), (65, 31731), (80, 31566),

Gene: Deano_45 Start: 31888, Stop: 31586, Start Num: 45
Candidate Starts for Deano_45:
(Start: 45 @31888 has 144 MA's), (55, 31846), (73, 31756), (74, 31717), (78, 31669), (80, 31636),

Gene: DeerParkTS_45 Start: 31640, Stop: 31224, Start Num: 15
Candidate Starts for DeerParkTS_45:
(Start: 15 @31640 has 81 MA's), (Start: 27 @31562 has 1 MA's), (46, 31517), (59, 31457), (80, 31274),

Gene: Deloris_47 Start: 32057, Stop: 31644, Start Num: 12
Candidate Starts for Deloris_47:
(Start: 12 @32057 has 51 MA's), (29, 31967), (37, 31958), (49, 31922), (62, 31856), (80, 31691),

Gene: DelvinSonDorr_47 Start: 31025, Stop: 30597, Start Num: 15
Candidate Starts for DelvinSonDorr_47:
(Start: 9 @31052 has 3 MA's), (Start: 15 @31025 has 81 MA's), (30, 30929), (43, 30893), (63, 30803), (68, 30776), (69, 30773), (83, 30617),

Gene: Dhanush_46 Start: 31883, Stop: 31581, Start Num: 45
Candidate Starts for Dhanush_46:
(5, 32153), (Start: 45 @31883 has 144 MA's), (73, 31751), (74, 31712), (78, 31664), (80, 31631),

Gene: Dignity_49 Start: 32681, Stop: 32259, Start Num: 12
Candidate Starts for Dignity_49:
(Start: 12 @32681 has 51 MA's), (Start: 15 @32672 has 81 MA's), (32, 32579), (46, 32549), (80, 32306),

Gene: DirtyDunning_45 Start: 31898, Stop: 31575, Start Num: 45
Candidate Starts for DirtyDunning_45:
(Start: 45 @31898 has 144 MA's), (49, 31883), (73, 31745), (74, 31706), (78, 31658), (80, 31625),

Gene: Drake55_49 Start: 32605, Stop: 32183, Start Num: 12
Candidate Starts for Drake55_49:
(Start: 12 @32605 has 51 MA's), (Start: 15 @32596 has 81 MA's), (32, 32503), (37, 32497), (46, 32473), (80, 32230),

Gene: Drake94_43 Start: 30743, Stop: 30387, Start Num: 38
Candidate Starts for Drake94_43:
(11, 30887), (Start: 38 @30743 has 11 MA's), (72, 30560), (77, 30482),

Gene: Druantia_46 Start: 31883, Stop: 31581, Start Num: 45
Candidate Starts for Druantia_46:

(5, 32153), (Start: 45 @31883 has 144 MA's), (73, 31751), (74, 31712), (78, 31664), (80, 31631),

Gene: DudeLittle_46 Start: 32250, Stop: 31828, Start Num: 12
Candidate Starts for DudeLittle_46:
(Start: 12 @32250 has 51 MA's), (Start: 15 @32241 has 81 MA's), (20, 32205), (26, 32172), (Start: 27 @32163 has 1 MA's), (80, 31875),

Gene: Duplo_49 Start: 31944, Stop: 31534, Start Num: 15
Candidate Starts for Duplo_49:
(2, 32271), (3, 32259), (Start: 15 @31944 has 81 MA's), (Start: 45 @31824 has 144 MA's), (52, 31800), (54, 31794), (73, 31701), (78, 31614), (80, 31581),

Gene: DustyMartin_49 Start: 31547, Stop: 31209, Start Num: 38
Candidate Starts for DustyMartin_49:
(Start: 38 @31547 has 11 MA's), (56, 31487), (72, 31382), (77, 31304),

Gene: EZMoney23_45 Start: 32055, Stop: 31642, Start Num: 15
Candidate Starts for EZMoney23_45:
(Start: 15 @32055 has 81 MA's), (Start: 27 @31977 has 1 MA's), (35, 31959), (46, 31932), (80, 31689),

Gene: Eagle_46 Start: 31905, Stop: 31603, Start Num: 45
Candidate Starts for Eagle_46:
(5, 32175), (Start: 45 @31905 has 144 MA's), (73, 31773), (74, 31734), (78, 31686), (80, 31653),

Gene: Eaglepride_46 Start: 31543, Stop: 31214, Start Num: 36
Candidate Starts for Eaglepride_46:
(11, 31681), (Start: 16 @31654 has 1 MA's), (Start: 36 @31543 has 1 MA's), (69, 31393), (77, 31309),

Gene: Eapen_46 Start: 31875, Stop: 31573, Start Num: 45
Candidate Starts for Eapen_46:
(5, 32145), (Start: 45 @31875 has 144 MA's), (73, 31743), (74, 31704), (78, 31656), (80, 31623),

Gene: Ebony_47 Start: 31284, Stop: 30937, Start Num: 25
Candidate Starts for Ebony_47:
(Start: 25 @31284 has 28 MA's), (33, 31251), (44, 31230), (78, 31017), (80, 30984),

Gene: Echild_47 Start: 31587, Stop: 31165, Start Num: 12
Candidate Starts for Echild_47:
(Start: 12 @31587 has 51 MA's), (Start: 15 @31578 has 81 MA's), (Start: 27 @31500 has 1 MA's), (80, 31212),

Gene: Edison31_44 Start: 31487, Stop: 31149, Start Num: 38
Candidate Starts for Edison31_44:
(11, 31631), (18, 31580), (Start: 38 @31487 has 11 MA's), (69, 31337), (72, 31322), (77, 31244),

Gene: Equemioh13_48 Start: 32422, Stop: 31988, Start Num: 15
Candidate Starts for Equemioh13_48:
(Start: 15 @32422 has 81 MA's), (31, 32323), (44, 32287), (80, 32035),

Gene: Eris_45 Start: 31880, Stop: 31578, Start Num: 45
Candidate Starts for Eris_45:
(5, 32150), (Start: 45 @31880 has 144 MA's), (73, 31748), (74, 31709), (78, 31661), (80, 31628),

Gene: Eros_46 Start: 31882, Stop: 31580, Start Num: 45
Candidate Starts for Eros_46:
(5, 32152), (Start: 45 @31882 has 144 MA's), (73, 31750), (74, 31711), (78, 31663), (80, 31630),

Gene: Et2Brutus_46 Start: 31244, Stop: 30897, Start Num: 25
Candidate Starts for Et2Brutus_46:
(Start: 25 @31244 has 28 MA's), (33, 31211), (44, 31190), (78, 30977), (80, 30944),

Gene: Eurydice_47 Start: 31877, Stop: 31575, Start Num: 45
Candidate Starts for Eurydice_47:
(5, 32147), (Start: 45 @31877 has 144 MA's), (73, 31745), (74, 31706), (78, 31658), (80, 31625),

Gene: EvilGenius_49 Start: 33877, Stop: 33455, Start Num: 12
Candidate Starts for EvilGenius_49:
(Start: 12 @33877 has 51 MA's), (Start: 15 @33868 has 81 MA's), (32, 33775), (Start: 45 @33748 has 144 MA's), (80, 33502),

Gene: Fameo_47 Start: 32426, Stop: 32004, Start Num: 12
Candidate Starts for Fameo_47:
(Start: 12 @32426 has 51 MA's), (Start: 15 @32417 has 81 MA's), (20, 32381), (Start: 27 @32339 has 1 MA's), (80, 32051),

Gene: Fibonacci_47 Start: 31259, Stop: 30912, Start Num: 25
Candidate Starts for Fibonacci_47:
(Start: 25 @31259 has 28 MA's), (33, 31226), (44, 31205), (78, 30992), (80, 30959),

Gene: FiringLine_47 Start: 32097, Stop: 31675, Start Num: 12
Candidate Starts for FiringLine_47:
(Start: 12 @32097 has 51 MA's), (Start: 15 @32088 has 81 MA's), (20, 32052), (Start: 27 @32010 has 1 MA's), (80, 31722),

Gene: First_0048 Start: 32311, Stop: 31889, Start Num: 12
Candidate Starts for First_0048:
(Start: 12 @32311 has 51 MA's), (Start: 15 @32302 has 81 MA's), (80, 31936),

Gene: Flare16_47 Start: 32181, Stop: 31747, Start Num: 15
Candidate Starts for Flare16_47:
(Start: 15 @32181 has 81 MA's), (31, 32082), (44, 32046), (80, 31794),

Gene: Flaverint_48 Start: 31706, Stop: 31359, Start Num: 25
Candidate Starts for Flaverint_48:
(Start: 25 @31706 has 28 MA's), (33, 31673), (44, 31652), (78, 31439), (80, 31406),

Gene: Florean_46 Start: 31879, Stop: 31577, Start Num: 45
Candidate Starts for Florean_46:
(5, 32149), (Start: 45 @31879 has 144 MA's), (73, 31747), (74, 31708), (78, 31660), (80, 31627),

Gene: Flux_46 Start: 31879, Stop: 31577, Start Num: 45
Candidate Starts for Flux_46:
(5, 32149), (Start: 45 @31879 has 144 MA's), (73, 31747), (74, 31708), (78, 31660), (80, 31627),

Gene: ForesterFrank_46 Start: 32797, Stop: 32381, Start Num: 15
Candidate Starts for ForesterFrank_46:

(Start: 15 @32797 has 81 MA's), (22, 32749), (Start: 27 @32719 has 1 MA's), (35, 32701), (46, 32674), (80, 32428), (83, 32401),

Gene: Funston_45 Start: 31880, Stop: 31578, Start Num: 45
Candidate Starts for Funston_45:
(Start: 45 @31880 has 144 MA's), (73, 31748), (74, 31709), (78, 31661), (80, 31628),

Gene: Gadost_46 Start: 31884, Stop: 31582, Start Num: 45
Candidate Starts for Gadost_46:
(Start: 45 @31884 has 144 MA's), (73, 31752), (74, 31713), (78, 31665), (80, 31632),

Gene: Garak_51 Start: 31328, Stop: 30873, Start Num: 9
Candidate Starts for Garak_51:
(Start: 9 @31328 has 3 MA's), (Start: 15 @31301 has 81 MA's), (30, 31205), (60, 31091), (69, 31049), (83, 30893),

Gene: GaugeLDP_45 Start: 32488, Stop: 32036, Start Num: 14
Candidate Starts for GaugeLDP_45:
(Start: 9 @32512 has 3 MA's), (Start: 14 @32488 has 7 MA's), (21, 32428), (40, 32344), (80, 32083),

Gene: Georgie2_48 Start: 32142, Stop: 31720, Start Num: 12
Candidate Starts for Georgie2_48:
(Start: 12 @32142 has 51 MA's), (Start: 15 @32133 has 81 MA's), (32, 32040), (46, 32010), (80, 31767),

Gene: Gilberta_48 Start: 31696, Stop: 31349, Start Num: 25
Candidate Starts for Gilberta_48:
(Start: 25 @31696 has 28 MA's), (33, 31663), (44, 31642), (78, 31429), (80, 31396),

Gene: Gladiator_47 Start: 30461, Stop: 30033, Start Num: 15
Candidate Starts for Gladiator_47:
(Start: 9 @30488 has 3 MA's), (Start: 15 @30461 has 81 MA's), (30, 30365), (43, 30329), (63, 30239), (68, 30212), (69, 30209), (83, 30053),

Gene: Goose_45 Start: 31271, Stop: 30933, Start Num: 38
Candidate Starts for Goose_45:
(11, 31415), (18, 31364), (Start: 38 @31271 has 11 MA's), (56, 31211), (69, 31121), (72, 31106), (77, 31028),

Gene: Gratitude_48 Start: 32422, Stop: 31988, Start Num: 15
Candidate Starts for Gratitude_48:
(Start: 15 @32422 has 81 MA's), (31, 32323), (44, 32287), (80, 32035),

Gene: GreedyLawyer_49 Start: 31137, Stop: 30709, Start Num: 15
Candidate Starts for GreedyLawyer_49:
(Start: 9 @31164 has 3 MA's), (Start: 15 @31137 has 81 MA's), (30, 31041), (43, 31005), (63, 30915), (68, 30888), (69, 30885), (83, 30729),

Gene: Gruunaga_49 Start: 31137, Stop: 30709, Start Num: 15
Candidate Starts for Gruunaga_49:
(Start: 9 @31164 has 3 MA's), (Start: 15 @31137 has 81 MA's), (30, 31041), (60, 30927), (69, 30885), (83, 30729),

Gene: HamSlice_45 Start: 31878, Stop: 31576, Start Num: 45
Candidate Starts for HamSlice_45:
(5, 32148), (Start: 45 @31878 has 144 MA's), (73, 31746), (74, 31707), (78, 31659), (80, 31626),

Gene: Hammer_50 Start: 30740, Stop: 30312, Start Num: 15
Candidate Starts for Hammer_50:
(Start: 9 @30767 has 3 MA's), (Start: 15 @30740 has 81 MA's), (30, 30644), (60, 30530), (69, 30488), (83, 30332),

Gene: Happiness_45 Start: 31885, Stop: 31583, Start Num: 45
Candidate Starts for Happiness_45:
(5, 32155), (Start: 45 @31885 has 144 MA's), (73, 31753), (74, 31714), (78, 31666), (80, 31633),

Gene: HarryHoudini_48 Start: 32614, Stop: 32192, Start Num: 12
Candidate Starts for HarryHoudini_48:
(Start: 12 @32614 has 51 MA's), (Start: 15 @32605 has 81 MA's), (32, 32512), (37, 32506), (46, 32482), (80, 32239),

Gene: Heffalump_46 Start: 32894, Stop: 32472, Start Num: 12
Candidate Starts for Heffalump_46:
(Start: 12 @32894 has 51 MA's), (Start: 15 @32885 has 81 MA's), (20, 32849), (Start: 27 @32807 has 1 MA's), (80, 32519),

Gene: Helmet_51 Start: 31301, Stop: 30873, Start Num: 15
Candidate Starts for Helmet_51:
(Start: 9 @31328 has 3 MA's), (Start: 15 @31301 has 81 MA's), (30, 31205), (60, 31091), (69, 31049), (83, 30893),

Gene: Herbertwm_47 Start: 31973, Stop: 31524, Start Num: 15
Candidate Starts for Herbertwm_47:
(Start: 15 @31973 has 81 MA's), (21, 31916), (30, 31856), (68, 31703), (70, 31697), (78, 31604), (83, 31544),

Gene: Hexamo_49 Start: 30949, Stop: 30494, Start Num: 9
Candidate Starts for Hexamo_49:
(Start: 9 @30949 has 3 MA's), (Start: 15 @30922 has 81 MA's), (30, 30826), (60, 30712), (69, 30670), (83, 30514),

Gene: HippoHollow_47 Start: 33647, Stop: 33225, Start Num: 12
Candidate Starts for HippoHollow_47:
(Start: 12 @33647 has 51 MA's), (Start: 15 @33638 has 81 MA's), (Start: 27 @33560 has 1 MA's), (80, 33272),

Gene: Holli_45 Start: 31670, Stop: 31368, Start Num: 45
Candidate Starts for Holli_45:
(5, 31940), (Start: 45 @31670 has 144 MA's), (73, 31538), (74, 31499), (78, 31451), (80, 31418),

Gene: Houdini22_46 Start: 31884, Stop: 31582, Start Num: 45
Candidate Starts for Houdini22_46:
(Start: 45 @31884 has 144 MA's), (73, 31752), (74, 31713), (78, 31665), (80, 31632),

Gene: Hutc2_47 Start: 31259, Stop: 30912, Start Num: 25
Candidate Starts for Hutc2_47:

(Start: 25 @31259 has 28 MA's), (33, 31226), (44, 31205), (78, 30992), (80, 30959),

Gene: Huxley_45 Start: 31941, Stop: 31639, Start Num: 45
Candidate Starts for Huxley_45:
(Start: 45 @31941 has 144 MA's), (73, 31809), (74, 31770), (78, 31722), (80, 31689),

Gene: ICleared_46 Start: 31909, Stop: 31607, Start Num: 45
Candidate Starts for ICleared_46:
(5, 32179), (Start: 45 @31909 has 144 MA's), (73, 31777), (74, 31738), (78, 31690), (80, 31657),

Gene: Iceman_46 Start: 32166, Stop: 31864, Start Num: 45
Candidate Starts for Iceman_46:
(5, 32436), (Start: 45 @32166 has 144 MA's), (73, 32034), (74, 31995), (78, 31947), (80, 31914),

Gene: Imbriano_50 Start: 31155, Stop: 30727, Start Num: 15
Candidate Starts for Imbriano_50:
(Start: 9 @31182 has 3 MA's), (Start: 15 @31155 has 81 MA's), (30, 31059), (43, 31023), (63, 30933), (68, 30906), (69, 30903), (83, 30747),

Gene: Indra_52 Start: 31302, Stop: 30874, Start Num: 15
Candidate Starts for Indra_52:
(Start: 9 @31329 has 3 MA's), (Start: 15 @31302 has 81 MA's), (30, 31206), (60, 31092), (69, 31050), (83, 30894),

Gene: Insomnia_48 Start: 31764, Stop: 31417, Start Num: 25
Candidate Starts for Insomnia_48:
(Start: 25 @31764 has 28 MA's), (33, 31731), (44, 31710), (78, 31497), (80, 31464),

Gene: Iracema64_47 Start: 32144, Stop: 31842, Start Num: 45
Candidate Starts for Iracema64_47:
(5, 32414), (Start: 45 @32144 has 144 MA's), (73, 32012), (74, 31973), (78, 31925), (80, 31892),

Gene: IronMan_47 Start: 33279, Stop: 32860, Start Num: 13
Candidate Starts for IronMan_47:
(Start: 13 @33279 has 7 MA's), (Start: 27 @33198 has 1 MA's), (51, 33132), (55, 33117), (66, 33063), (80, 32907), (83, 32880),

Gene: Isiphiwo_47 Start: 30674, Stop: 30246, Start Num: 15
Candidate Starts for Isiphiwo_47:
(Start: 9 @30701 has 3 MA's), (Start: 15 @30674 has 81 MA's), (30, 30578), (43, 30542), (63, 30452), (68, 30425), (69, 30422), (83, 30266),

Gene: Iwokeuplikedis_50 Start: 32216, Stop: 31788, Start Num: 15
Candidate Starts for Iwokeuplikedis_50:
(Start: 15 @32216 has 81 MA's), (68, 31967), (80, 31835),

Gene: Jaan_47 Start: 33445, Stop: 33047, Start Num: 13
Candidate Starts for Jaan_47:
(Start: 13 @33445 has 7 MA's), (Start: 36 @33364 has 1 MA's), (50, 33322), (66, 33250), (80, 33094),

Gene: Jabith_48 Start: 31765, Stop: 31418, Start Num: 25
Candidate Starts for Jabith_48:
(Start: 25 @31765 has 28 MA's), (33, 31732), (44, 31711), (78, 31498), (80, 31465),

Gene: Jaykayelowell_44 Start: 31873, Stop: 31571, Start Num: 45
Candidate Starts for Jaykayelowell_44:
(5, 32143), (Start: 45 @31873 has 144 MA's), (73, 31741), (74, 31702), (78, 31654), (80, 31621),

Gene: Jeffabunny_49 Start: 30958, Stop: 30530, Start Num: 15
Candidate Starts for Jeffabunny_49:
(Start: 9 @30985 has 3 MA's), (Start: 15 @30958 has 81 MA's), (30, 30862), (60, 30748), (69, 30706), (83, 30550),

Gene: Jerm_49 Start: 32674, Stop: 32252, Start Num: 12
Candidate Starts for Jerm_49:
(Start: 12 @32674 has 51 MA's), (Start: 15 @32665 has 81 MA's), (32, 32572), (46, 32542), (80, 32299),

Gene: JetBlade_46 Start: 31874, Stop: 31572, Start Num: 45
Candidate Starts for JetBlade_46:
(5, 32144), (Start: 45 @31874 has 144 MA's), (73, 31742), (74, 31703), (78, 31655), (80, 31622),

Gene: JoongJeon_45 Start: 31877, Stop: 31575, Start Num: 45
Candidate Starts for JoongJeon_45:
(Start: 45 @31877 has 144 MA's), (73, 31745), (74, 31706), (78, 31658), (80, 31625),

Gene: Jordennis_48 Start: 30594, Stop: 30166, Start Num: 15
Candidate Starts for Jordennis_48:
(Start: 9 @30621 has 3 MA's), (Start: 15 @30594 has 81 MA's), (30, 30498), (43, 30462), (63, 30372), (68, 30345), (69, 30342),

Gene: Joselito_48 Start: 31705, Stop: 31358, Start Num: 25
Candidate Starts for Joselito_48:
(Start: 25 @31705 has 28 MA's), (33, 31672), (44, 31651), (78, 31438), (80, 31405),

Gene: JoshKayV_49 Start: 32755, Stop: 32333, Start Num: 12
Candidate Starts for JoshKayV_49:
(Start: 12 @32755 has 51 MA's), (Start: 15 @32746 has 81 MA's), (32, 32653), (37, 32647), (46, 32623), (47, 32620), (80, 32380),

Gene: Journey13_41 Start: 30529, Stop: 30176, Start Num: 27
Candidate Starts for Journey13_41:
(Start: 27 @30529 has 1 MA's), (Start: 28 @30526 has 1 MA's), (31, 30508), (40, 30484), (78, 30256),

Gene: Jsquared_45 Start: 31025, Stop: 30618, Start Num: 15
Candidate Starts for Jsquared_45:
(Start: 15 @31025 has 81 MA's), (40, 30926), (Start: 45 @30905 has 144 MA's), (78, 30698), (80, 30665),

Gene: Junimo_45 Start: 31880, Stop: 31578, Start Num: 45
Candidate Starts for Junimo_45:
(5, 32150), (Start: 45 @31880 has 144 MA's), (73, 31748), (74, 31709), (78, 31661), (80, 31628),

Gene: KFPoly_45 Start: 31874, Stop: 31572, Start Num: 45
Candidate Starts for KFPoly_45:
(5, 32144), (Start: 45 @31874 has 144 MA's), (73, 31742), (74, 31703), (78, 31655), (80, 31622),

Gene: Kalpine_45 Start: 32395, Stop: 31982, Start Num: 15
Candidate Starts for Kalpine_45:
(Start: 15 @32395 has 81 MA's), (Start: 27 @32317 has 1 MA's), (80, 32029),

Gene: Kampy_46 Start: 31882, Stop: 31580, Start Num: 45
Candidate Starts for Kampy_46:
(5, 32152), (Start: 45 @31882 has 144 MA's), (73, 31750), (74, 31711), (78, 31663), (80, 31630),

Gene: Katalie136_45 Start: 31853, Stop: 31530, Start Num: 45
Candidate Starts for Katalie136_45:
(Start: 45 @31853 has 144 MA's), (64, 31754), (65, 31745), (67, 31730), (73, 31700), (80, 31580),

Gene: KekoraPapaka_46 Start: 31880, Stop: 31578, Start Num: 45
Candidate Starts for KekoraPapaka_46:
(5, 32150), (Start: 45 @31880 has 144 MA's), (73, 31748), (74, 31709), (78, 31661), (80, 31628),

Gene: Kerberos_49 Start: 31906, Stop: 31496, Start Num: 15
Candidate Starts for Kerberos_49:
(2, 32233), (3, 32221), (Start: 15 @31906 has 81 MA's), (Start: 45 @31786 has 144 MA's), (52, 31762), (54, 31756), (73, 31663), (78, 31576), (80, 31543),

Gene: Kimba_47 Start: 31285, Stop: 30938, Start Num: 25
Candidate Starts for Kimba_47:
(Start: 25 @31285 has 28 MA's), (33, 31252), (44, 31231), (78, 31018), (80, 30985),

Gene: Kimona_46 Start: 30459, Stop: 30046, Start Num: 15
Candidate Starts for Kimona_46:
(Start: 15 @30459 has 81 MA's), (29, 30369), (49, 30324), (69, 30228), (80, 30099),

Gene: KingCyrus_49 Start: 33872, Stop: 33450, Start Num: 12
Candidate Starts for KingCyrus_49:
(Start: 12 @33872 has 51 MA's), (32, 33770), (Start: 45 @33743 has 144 MA's), (80, 33497), (82, 33473),

Gene: Kingmustik0402_46 Start: 31869, Stop: 31567, Start Num: 45
Candidate Starts for Kingmustik0402_46:
(5, 32139), (Start: 45 @31869 has 144 MA's), (73, 31737), (74, 31698), (78, 31650), (80, 31617),

Gene: Kinmap_44 Start: 31426, Stop: 31016, Start Num: 15
Candidate Starts for Kinmap_44:
(Start: 15 @31426 has 81 MA's), (58, 31252), (61, 31231), (78, 31096),

Gene: KittenMittens_42 Start: 30751, Stop: 30395, Start Num: 38
Candidate Starts for KittenMittens_42:
(11, 30895), (Start: 38 @30751 has 11 MA's), (72, 30568), (77, 30490),

Gene: Koan_44 Start: 31880, Stop: 31578, Start Num: 45
Candidate Starts for Koan_44:
(5, 32150), (Start: 45 @31880 has 144 MA's), (73, 31748), (74, 31709), (78, 31661), (80, 31628),

Gene: Koduck_48 Start: 31317, Stop: 30889, Start Num: 10
Candidate Starts for Koduck_48:

(Start: 10 @31317 has 2 MA's), (23, 31263), (Start: 27 @31239 has 1 MA's), (40, 31197), (Start: 45 @31176 has 144 MA's), (50, 31155), (57, 31134), (78, 30969), (80, 30936),

Gene: Koko_50 Start: 31279, Stop: 30851, Start Num: 15
Candidate Starts for Koko_50:
(Start: 9 @31306 has 3 MA's), (Start: 15 @31279 has 81 MA's), (30, 31183), (69, 31027), (83, 30871),

Gene: Koreni_45 Start: 31561, Stop: 31259, Start Num: 45
Candidate Starts for Koreni_45:
(5, 31831), (Start: 45 @31561 has 144 MA's), (73, 31429), (74, 31390), (78, 31342), (80, 31309),

Gene: Kratark_46 Start: 32040, Stop: 31717, Start Num: 45
Candidate Starts for Kratark_46:
(Start: 45 @32040 has 144 MA's), (49, 32025), (73, 31887), (78, 31800), (80, 31767),

Gene: Kremtemulon_46 Start: 31831, Stop: 31529, Start Num: 45
Candidate Starts for Kremtemulon_46:
(5, 32101), (Start: 45 @31831 has 144 MA's), (73, 31699), (74, 31660), (80, 31579),

Gene: Kyee_46 Start: 31878, Stop: 31576, Start Num: 45
Candidate Starts for Kyee_46:
(Start: 45 @31878 has 144 MA's), (73, 31746), (74, 31707), (78, 31659), (80, 31626),

Gene: L5_46 Start: 31389, Stop: 30961, Start Num: 10
Candidate Starts for L5_46:
(Start: 10 @31389 has 2 MA's), (23, 31335), (Start: 27 @31311 has 1 MA's), (40, 31269), (Start: 45 @31248 has 144 MA's), (50, 31227), (57, 31206), (78, 31041), (80, 31008),

Gene: LHTSCC_48 Start: 32302, Stop: 32000, Start Num: 45
Candidate Starts for LHTSCC_48:
(5, 32572), (Start: 45 @32302 has 144 MA's), (73, 32170), (74, 32131), (80, 32050),

Gene: LadyBird_51 Start: 32746, Stop: 32324, Start Num: 12
Candidate Starts for LadyBird_51:
(Start: 12 @32746 has 51 MA's), (Start: 15 @32737 has 81 MA's), (Start: 27 @32659 has 1 MA's), (35, 32641), (80, 32371),

Gene: Landor_47 Start: 33357, Stop: 32938, Start Num: 13
Candidate Starts for Landor_47:
(Start: 13 @33357 has 7 MA's), (Start: 27 @33276 has 1 MA's), (50, 33213), (66, 33141), (80, 32985),

Gene: LappelDuVide_46 Start: 31879, Stop: 31577, Start Num: 45
Candidate Starts for LappelDuVide_46:
(5, 32149), (Start: 45 @31879 has 144 MA's), (73, 31747), (74, 31708), (78, 31660), (80, 31627),

Gene: Larenn_46 Start: 32287, Stop: 31865, Start Num: 12
Candidate Starts for Larenn_46:
(Start: 12 @32287 has 51 MA's), (Start: 15 @32278 has 81 MA's), (24, 32221), (42, 32170), (80, 31912),

Gene: Lemur_46 Start: 31877, Stop: 31575, Start Num: 45
Candidate Starts for Lemur_46:
(5, 32147), (Start: 45 @31877 has 144 MA's), (73, 31745), (74, 31706), (78, 31658), (80, 31625),

Gene: LeoAvram_46 Start: 31880, Stop: 31578, Start Num: 45
Candidate Starts for LeoAvram_46:
(5, 32150), (Start: 45 @31880 has 144 MA's), (73, 31748), (74, 31709), (78, 31661), (80, 31628),

Gene: Leogania_47 Start: 33298, Stop: 32876, Start Num: 12
Candidate Starts for Leogania_47:
(Start: 12 @33298 has 51 MA's), (Start: 15 @33289 has 81 MA's), (Start: 27 @33211 has 1 MA's), (80, 32923),

Gene: Leviathan_49 Start: 32730, Stop: 32308, Start Num: 12
Candidate Starts for Leviathan_49:
(Start: 12 @32730 has 51 MA's), (Start: 15 @32721 has 81 MA's), (32, 32628), (37, 32622), (46, 32598), (80, 32355),

Gene: LilTurb_48 Start: 32563, Stop: 32141, Start Num: 12
Candidate Starts for LilTurb_48:
(Start: 12 @32563 has 51 MA's), (Start: 15 @32554 has 81 MA's), (32, 32461), (37, 32455), (80, 32188),

Gene: Lilbunny_48 Start: 30932, Stop: 30504, Start Num: 15
Candidate Starts for Lilbunny_48:
(Start: 9 @30959 has 3 MA's), (Start: 15 @30932 has 81 MA's), (30, 30836), (60, 30722), (69, 30680), (83, 30524),

Gene: LionsBait_47 Start: 33648, Stop: 33226, Start Num: 12
Candidate Starts for LionsBait_47:
(Start: 12 @33648 has 51 MA's), (Start: 15 @33639 has 81 MA's), (Start: 27 @33561 has 1 MA's), (80, 33273),

Gene: LittleB_46 Start: 31881, Stop: 31579, Start Num: 45
Candidate Starts for LittleB_46:
(5, 32151), (Start: 45 @31881 has 144 MA's), (73, 31749), (74, 31710), (78, 31662), (80, 31629),

Gene: LittleGuy_46 Start: 31776, Stop: 31474, Start Num: 45
Candidate Starts for LittleGuy_46:
(5, 32046), (Start: 45 @31776 has 144 MA's), (73, 31644), (74, 31605), (78, 31557), (80, 31524),

Gene: LochMonster_47 Start: 32116, Stop: 31814, Start Num: 45
Candidate Starts for LochMonster_47:
(5, 32386), (Start: 45 @32116 has 144 MA's), (55, 32074), (73, 31984), (74, 31945), (78, 31897), (80, 31864),

Gene: Lokk_46 Start: 32421, Stop: 31924, Start Num: 6
Candidate Starts for Lokk_46:
(Start: 6 @32421 has 2 MA's), (42, 32229), (Start: 45 @32217 has 144 MA's), (59, 32154), (61, 32142), (80, 31971),

Gene: Lorenzo_46 Start: 31880, Stop: 31578, Start Num: 45
Candidate Starts for Lorenzo_46:
(5, 32150), (Start: 45 @31880 has 144 MA's), (73, 31748), (74, 31709), (78, 31661), (80, 31628),

Gene: Loser_49 Start: 33095, Stop: 32673, Start Num: 12

Candidate Starts for Loser_49:
(1, 33422), (Start: 12 @33095 has 51 MA's), (Start: 15 @33086 has 81 MA's), (24, 33029), (32, 32993), (80, 32720),

Gene: Lucivia_48 Start: 31754, Stop: 31407, Start Num: 25
Candidate Starts for Lucivia_48:
(Start: 25 @31754 has 28 MA's), (33, 31721), (44, 31700), (78, 31487), (80, 31454),

Gene: Lunsford_47 Start: 31874, Stop: 31572, Start Num: 45
Candidate Starts for Lunsford_47:
(5, 32144), (Start: 45 @31874 has 144 MA's), (73, 31742), (74, 31703), (78, 31655), (80, 31622),

Gene: MaCh_48 Start: 31692, Stop: 31345, Start Num: 25
Candidate Starts for MaCh_48:
(Start: 25 @31692 has 28 MA's), (33, 31659), (44, 31638), (78, 31425), (80, 31392),

Gene: Mabel_47 Start: 31294, Stop: 30947, Start Num: 25
Candidate Starts for Mabel_47:
(Start: 25 @31294 has 28 MA's), (33, 31261), (44, 31240), (78, 31027), (80, 30994),

Gene: MajorMajor_46 Start: 31085, Stop: 30678, Start Num: 15
Candidate Starts for MajorMajor_46:
(Start: 15 @31085 has 81 MA's), (24, 31049), (Start: 45 @30965 has 144 MA's), (78, 30758), (80, 30725),

Gene: Malec_47 Start: 32851, Stop: 32429, Start Num: 12
Candidate Starts for Malec_47:
(Start: 12 @32851 has 51 MA's), (Start: 15 @32842 has 81 MA's), (24, 32785), (42, 32734), (80, 32476),

Gene: Maverick_46 Start: 31880, Stop: 31578, Start Num: 45
Candidate Starts for Maverick_46:
(Start: 45 @31880 has 144 MA's), (73, 31748), (74, 31709), (78, 31661), (80, 31628),

Gene: Maxo_47 Start: 31882, Stop: 31580, Start Num: 45
Candidate Starts for Maxo_47:
(5, 32152), (Start: 45 @31882 has 144 MA's), (73, 31750), (74, 31711), (78, 31663), (80, 31630),

Gene: Mayonnaise_45 Start: 31880, Stop: 31578, Start Num: 45
Candidate Starts for Mayonnaise_45:
(Start: 45 @31880 has 144 MA's), (73, 31748), (74, 31709), (78, 31661), (80, 31628),

Gene: Mazhar510_46 Start: 31881, Stop: 31579, Start Num: 45
Candidate Starts for Mazhar510_46:
(Start: 45 @31881 has 144 MA's), (73, 31749), (74, 31710), (78, 31662), (80, 31629),

Gene: McFly_49 Start: 31137, Stop: 30709, Start Num: 15
Candidate Starts for McFly_49:
(Start: 9 @31164 has 3 MA's), (Start: 15 @31137 has 81 MA's), (30, 31041), (43, 31005), (63, 30915), (68, 30888), (69, 30885), (83, 30729),

Gene: Medusa_46 Start: 31879, Stop: 31577, Start Num: 45
Candidate Starts for Medusa_46:

(5, 32149), (Start: 45 @31879 has 144 MA's), (73, 31747), (74, 31708), (78, 31660), (80, 31627),

Gene: MeeZee_46 Start: 31877, Stop: 31575, Start Num: 45
Candidate Starts for MeeZee_46:
(5, 32147), (Start: 45 @31877 has 144 MA's), (73, 31745), (74, 31706), (78, 31658), (80, 31625),

Gene: Melvin_48 Start: 31875, Stop: 31573, Start Num: 45
Candidate Starts for Melvin_48:
(5, 32145), (Start: 45 @31875 has 144 MA's), (73, 31743), (74, 31704), (78, 31656), (80, 31623),

Gene: MiculUcigas_47 Start: 32081, Stop: 31647, Start Num: 15
Candidate Starts for MiculUcigas_47:
(Start: 15 @32081 has 81 MA's), (31, 31982), (44, 31946), (80, 31694),

Gene: Miko_44 Start: 32243, Stop: 31821, Start Num: 12
Candidate Starts for Miko_44:
(Start: 12 @32243 has 51 MA's), (Start: 15 @32234 has 81 MA's), (42, 32126), (Start: 45 @32114 has 144 MA's), (61, 32039), (80, 31868),

Gene: Millski_45 Start: 31881, Stop: 31579, Start Num: 45
Candidate Starts for Millski_45:
(5, 32151), (Start: 45 @31881 has 144 MA's), (73, 31749), (74, 31710), (78, 31662), (80, 31629),

Gene: Miramae_45 Start: 32041, Stop: 31718, Start Num: 45
Candidate Starts for Miramae_45:
(Start: 45 @32041 has 144 MA's), (49, 32026), (65, 31933), (67, 31918), (73, 31888), (77, 31813), (80, 31768),

Gene: MissWhite_46 Start: 30606, Stop: 30256, Start Num: 28
Candidate Starts for MissWhite_46:
(Start: 28 @30606 has 1 MA's), (31, 30588), (71, 30426), (78, 30336), (79, 30315),

Gene: Morpher26_45 Start: 31874, Stop: 31551, Start Num: 45
Candidate Starts for Morpher26_45:
(Start: 45 @31874 has 144 MA's), (64, 31775), (65, 31766), (67, 31751), (73, 31721), (80, 31601),

Gene: Morrow_47 Start: 31886, Stop: 31584, Start Num: 45
Candidate Starts for Morrow_47:
(5, 32156), (Start: 45 @31886 has 144 MA's), (73, 31754), (74, 31715), (78, 31667), (80, 31634),

Gene: Mulciber_47 Start: 31256, Stop: 30909, Start Num: 25
Candidate Starts for Mulciber_47:
(Start: 25 @31256 has 28 MA's), (33, 31223), (44, 31202), (78, 30989), (80, 30956),

Gene: Munch_48 Start: 31705, Stop: 31358, Start Num: 25
Candidate Starts for Munch_48:
(Start: 25 @31705 has 28 MA's), (33, 31672), (44, 31651), (78, 31438), (80, 31405),

Gene: Mundrea_45 Start: 31861, Stop: 31538, Start Num: 45
Candidate Starts for Mundrea_45:
(Start: 45 @31861 has 144 MA's), (65, 31753), (67, 31738), (73, 31708), (77, 31633), (80, 31588),

Gene: NaSiaTalie_47 Start: 32178, Stop: 31744, Start Num: 15

Candidate Starts for NaSiaTalie_47:
(Start: 15 @32178 has 81 MA's), (31, 32079), (44, 32043), (80, 31791),

Gene: Naji_49 Start: 31906, Stop: 31496, Start Num: 15
Candidate Starts for Naji_49:
(4, 32113), (Start: 15 @31906 has 81 MA's), (Start: 45 @31786 has 144 MA's), (52, 31762), (54, 31756), (73, 31663), (78, 31576), (80, 31543),

Gene: Nebs_47 Start: 31880, Stop: 31578, Start Num: 45
Candidate Starts for Nebs_47:
(5, 32150), (Start: 45 @31880 has 144 MA's), (73, 31748), (74, 31709), (78, 31661), (80, 31628),

Gene: Nemo27_46 Start: 31879, Stop: 31577, Start Num: 45
Candidate Starts for Nemo27_46:
(Start: 45 @31879 has 144 MA's), (73, 31747), (74, 31708), (78, 31660), (80, 31627),

Gene: Newrala_49 Start: 31148, Stop: 30720, Start Num: 15
Candidate Starts for Newrala_49:
(Start: 9 @31175 has 3 MA's), (Start: 15 @31148 has 81 MA's), (30, 31052), (43, 31016), (63, 30926), (68, 30899), (69, 30896), (83, 30740),

Gene: Noelle_46 Start: 32163, Stop: 31840, Start Num: 45
Candidate Starts for Noelle_46:
(Start: 45 @32163 has 144 MA's), (65, 32055), (73, 32010), (80, 31890),

Gene: NorthStar_45 Start: 31880, Stop: 31578, Start Num: 45
Candidate Starts for NorthStar_45:
(5, 32150), (Start: 45 @31880 has 144 MA's), (73, 31748), (74, 31709), (78, 31661), (80, 31628),

Gene: Northrop_46 Start: 31876, Stop: 31574, Start Num: 45
Candidate Starts for Northrop_46:
(5, 32146), (Start: 45 @31876 has 144 MA's), (73, 31744), (74, 31705), (78, 31657), (80, 31624),

Gene: NotAPhaseMom_46 Start: 31884, Stop: 31582, Start Num: 45
Candidate Starts for NotAPhaseMom_46:
(Start: 45 @31884 has 144 MA's), (73, 31752), (74, 31713), (78, 31665), (80, 31632),

Gene: NothingSpecial_45 Start: 32705, Stop: 32271, Start Num: 15
Candidate Starts for NothingSpecial_45:
(Start: 15 @32705 has 81 MA's), (31, 32606), (80, 32318),

Gene: Nyxis_46 Start: 31770, Stop: 31468, Start Num: 45
Candidate Starts for Nyxis_46:
(5, 32040), (Start: 45 @31770 has 144 MA's), (73, 31638), (74, 31599), (78, 31551), (80, 31518),

Gene: OKCentral2016_44 Start: 31174, Stop: 30836, Start Num: 38
Candidate Starts for OKCentral2016_44:
(11, 31318), (18, 31267), (Start: 38 @31174 has 11 MA's), (56, 31114), (69, 31024), (72, 31009), (77, 30931),

Gene: OKaNui_46 Start: 31930, Stop: 31628, Start Num: 45
Candidate Starts for OKaNui_46:
(5, 32200), (Start: 45 @31930 has 144 MA's), (73, 31798), (74, 31759), (78, 31711), (80, 31678),

Gene: Obama12_47 Start: 32304, Stop: 32002, Start Num: 45
Candidate Starts for Obama12_47:
(5, 32574), (Start: 45 @32304 has 144 MA's), (73, 32172), (74, 32133), (80, 32052),

Gene: Odin_46 Start: 30872, Stop: 30465, Start Num: 15
Candidate Starts for Odin_46:
(Start: 15 @30872 has 81 MA's), (40, 30773), (78, 30545), (80, 30512),

Gene: Ohfah_47 Start: 31880, Stop: 31578, Start Num: 45
Candidate Starts for Ohfah_47:
(5, 32150), (Start: 45 @31880 has 144 MA's), (73, 31748), (74, 31709), (78, 31661), (80, 31628),

Gene: Orange_47 Start: 31254, Stop: 30907, Start Num: 25
Candidate Starts for Orange_47:
(Start: 25 @31254 has 28 MA's), (33, 31221), (44, 31200), (78, 30987), (80, 30954),

Gene: PP_50 Start: 36311, Stop: 35883, Start Num: 16
Candidate Starts for PP_50:
(7, 36377), (Start: 16 @36311 has 1 MA's), (Start: 25 @36260 has 28 MA's), (50, 36179), (75, 35999), (76, 35981), (78, 35966), (81, 35918), (83, 35906),

Gene: Palestino_45 Start: 31880, Stop: 31578, Start Num: 45
Candidate Starts for Palestino_45:
(5, 32150), (Start: 45 @31880 has 144 MA's), (73, 31748), (74, 31709), (78, 31661), (80, 31628),

Gene: PeaceMeal1_43 Start: 30752, Stop: 30396, Start Num: 38
Candidate Starts for PeaceMeal1_43:
(11, 30896), (Start: 38 @30752 has 11 MA's), (72, 30569), (77, 30491),

Gene: Peaches_46 Start: 31879, Stop: 31577, Start Num: 45
Candidate Starts for Peaches_46:
(5, 32149), (Start: 45 @31879 has 144 MA's), (73, 31747), (74, 31708), (78, 31660), (80, 31627),

Gene: Perplexer_45 Start: 31850, Stop: 31527, Start Num: 45
Candidate Starts for Perplexer_45:
(Start: 45 @31850 has 144 MA's), (64, 31751), (65, 31742), (67, 31727), (73, 31697), (80, 31577),

Gene: PeterPeter_46 Start: 31877, Stop: 31575, Start Num: 45
Candidate Starts for PeterPeter_46:
(5, 32147), (Start: 45 @31877 has 144 MA's), (73, 31745), (74, 31706), (78, 31658), (80, 31625),

Gene: Petersenfast_47 Start: 31261, Stop: 30914, Start Num: 25
Candidate Starts for Petersenfast_47:
(Start: 25 @31261 has 28 MA's), (33, 31228), (44, 31207), (78, 30994), (80, 30961),

Gene: PetiteSangsue_45 Start: 31853, Stop: 31530, Start Num: 45
Candidate Starts for PetiteSangsue_45:
(Start: 45 @31853 has 144 MA's), (64, 31754), (65, 31745), (67, 31730), (73, 31700), (80, 31580),

Gene: Ph8s_49 Start: 31506, Stop: 31078, Start Num: 15
Candidate Starts for Ph8s_49:
(8, 31542), (Start: 15 @31506 has 81 MA's), (78, 31158), (80, 31125),

Gene: Phacado_46 Start: 31879, Stop: 31577, Start Num: 45
Candidate Starts for Phacado_46:
(Start: 45 @31879 has 144 MA's), (73, 31747), (74, 31708), (78, 31660), (80, 31627),

Gene: Phaded_48 Start: 33339, Stop: 32920, Start Num: 13
Candidate Starts for Phaded_48:
(Start: 13 @33339 has 7 MA's), (Start: 27 @33258 has 1 MA's), (50, 33195), (55, 33177), (66, 33123), (80, 32967),

Gene: Phelipe_47 Start: 31880, Stop: 31578, Start Num: 45
Candidate Starts for Phelipe_47:
(5, 32150), (Start: 45 @31880 has 144 MA's), (73, 31748), (74, 31709), (78, 31661), (80, 31628),

Gene: Phighter1804_46 Start: 31943, Stop: 31620, Start Num: 45
Candidate Starts for Phighter1804_46:
(Start: 45 @31943 has 144 MA's), (49, 31928), (73, 31790), (74, 31751), (78, 31703), (80, 31670),

Gene: Phontbonne_46 Start: 31771, Stop: 31469, Start Num: 45
Candidate Starts for Phontbonne_46:
(5, 32041), (Start: 45 @31771 has 144 MA's), (73, 31639), (74, 31600), (78, 31552), (80, 31519),

Gene: Pipcraft_44 Start: 31880, Stop: 31578, Start Num: 45
Candidate Starts for Pipcraft_44:
(5, 32150), (Start: 45 @31880 has 144 MA's), (73, 31748), (74, 31709), (78, 31661), (80, 31628),

Gene: Piro94_47 Start: 32531, Stop: 32109, Start Num: 12
Candidate Starts for Piro94_47:
(Start: 12 @32531 has 51 MA's), (Start: 15 @32522 has 81 MA's), (32, 32429), (37, 32423), (46, 32399), (80, 32156),

Gene: Pmask_49 Start: 31149, Stop: 30721, Start Num: 15
Candidate Starts for Pmask_49:
(Start: 9 @31176 has 3 MA's), (Start: 15 @31149 has 81 MA's), (30, 31053), (43, 31017), (63, 30927), (68, 30900), (69, 30897), (83, 30741),

Gene: Polymorphads_47 Start: 31873, Stop: 31571, Start Num: 45
Candidate Starts for Polymorphads_47:
(5, 32143), (Start: 45 @31873 has 144 MA's), (73, 31741), (74, 31702), (78, 31654), (80, 31621),

Gene: Polyphemus_50 Start: 31292, Stop: 30864, Start Num: 15
Candidate Starts for Polyphemus_50:
(Start: 9 @31319 has 3 MA's), (Start: 15 @31292 has 81 MA's), (30, 31196), (43, 31160), (63, 31070), (68, 31043), (69, 31040), (83, 30884),

Gene: Pomar16_49 Start: 31947, Stop: 31537, Start Num: 15
Candidate Starts for Pomar16_49:
(2, 32274), (3, 32262), (Start: 15 @31947 has 81 MA's), (Start: 45 @31827 has 144 MA's), (52, 31803), (54, 31797), (73, 31704), (78, 31617), (80, 31584),

Gene: Poompha_44 Start: 30750, Stop: 30394, Start Num: 38
Candidate Starts for Poompha_44:
(11, 30894), (Start: 38 @30750 has 11 MA's), (72, 30567), (77, 30489),

Gene: Power_46 Start: 32150, Stop: 31728, Start Num: 12
Candidate Starts for Power_46:
(Start: 12 @32150 has 51 MA's), (Start: 15 @32141 has 81 MA's), (20, 32105), (Start: 27 @32063 has 1 MA's), (80, 31775),

Gene: Priamo_50 Start: 30766, Stop: 30338, Start Num: 15
Candidate Starts for Priamo_50:
(Start: 9 @30793 has 3 MA's), (Start: 15 @30766 has 81 MA's), (30, 30670), (43, 30634), (63, 30544), (68, 30517), (69, 30514),

Gene: Prudy_46 Start: 32629, Stop: 32207, Start Num: 12
Candidate Starts for Prudy_46:
(Start: 12 @32629 has 51 MA's), (Start: 15 @32620 has 81 MA's), (29, 32530), (80, 32254),

Gene: Pukovnik_46 Start: 32944, Stop: 32528, Start Num: 13
Candidate Starts for Pukovnik_46:
(Start: 13 @32944 has 7 MA's), (19, 32914), (Start: 27 @32866 has 1 MA's), (46, 32821), (59, 32761), (66, 32731), (80, 32575),

Gene: Pumbaa_46 Start: 31825, Stop: 31523, Start Num: 45
Candidate Starts for Pumbaa_46:
(5, 32095), (Start: 45 @31825 has 144 MA's), (73, 31693), (74, 31654), (78, 31606), (80, 31573),

Gene: QueenB2_46 Start: 32110, Stop: 31688, Start Num: 12
Candidate Starts for QueenB2_46:
(Start: 12 @32110 has 51 MA's), (Start: 15 @32101 has 81 MA's), (20, 32065), (Start: 27 @32023 has 1 MA's), (80, 31735),

Gene: QueenBeesly_47 Start: 32097, Stop: 31675, Start Num: 12
Candidate Starts for QueenBeesly_47:
(Start: 12 @32097 has 51 MA's), (Start: 15 @32088 has 81 MA's), (20, 32052), (Start: 27 @32010 has 1 MA's), (80, 31722),

Gene: Quokka_45 Start: 31085, Stop: 30678, Start Num: 15
Candidate Starts for Quokka_45:
(Start: 15 @31085 has 81 MA's), (24, 31049), (Start: 45 @30965 has 144 MA's), (78, 30758), (80, 30725),

Gene: Rachaly_46 Start: 32420, Stop: 31998, Start Num: 12
Candidate Starts for Rachaly_46:
(Start: 12 @32420 has 51 MA's), (Start: 15 @32411 has 81 MA's), (42, 32303), (Start: 45 @32291 has 144 MA's), (61, 32216), (80, 32045),

Gene: RedRock_49 Start: 33308, Stop: 32886, Start Num: 12
Candidate Starts for RedRock_49:
(Start: 12 @33308 has 51 MA's), (Start: 15 @33299 has 81 MA's), (24, 33242), (32, 33206), (80, 32933),

Gene: Relief_45 Start: 31877, Stop: 31575, Start Num: 45
Candidate Starts for Relief_45:
(5, 32147), (Start: 45 @31877 has 144 MA's), (73, 31745), (74, 31706), (78, 31658), (80, 31625),

Gene: Retro23_48 Start: 32504, Stop: 32082, Start Num: 12
Candidate Starts for Retro23_48:
(Start: 12 @32504 has 51 MA's), (Start: 15 @32495 has 81 MA's), (32, 32402), (46, 32372), (80, 32129),

Gene: RhynO_46 Start: 31639, Stop: 31301, Start Num: 38
Candidate Starts for RhynO_46:
(Start: 38 @31639 has 11 MA's), (56, 31579), (72, 31474), (77, 31396),

Gene: Rifter_50 Start: 30703, Stop: 30275, Start Num: 15
Candidate Starts for Rifter_50:
(Start: 9 @30730 has 3 MA's), (Start: 15 @30703 has 81 MA's), (30, 30607), (60, 30493), (69, 30451), (83, 30295),

Gene: RockieBear_46 Start: 31880, Stop: 31578, Start Num: 45
Candidate Starts for RockieBear_46:
(5, 32150), (Start: 45 @31880 has 144 MA's), (73, 31748), (74, 31709), (78, 31661), (80, 31628),

Gene: Rocksand_46 Start: 31876, Stop: 31574, Start Num: 45
Candidate Starts for Rocksand_46:
(5, 32146), (Start: 45 @31876 has 144 MA's), (73, 31744), (74, 31705), (78, 31657), (80, 31624),

Gene: Roksolana_50 Start: 31185, Stop: 30757, Start Num: 15
Candidate Starts for Roksolana_50:
(Start: 9 @31212 has 3 MA's), (Start: 15 @31185 has 81 MA's), (30, 31089), (43, 31053), (63, 30963), (68, 30936), (69, 30933), (83, 30777),

Gene: Romney_46 Start: 31877, Stop: 31575, Start Num: 45
Candidate Starts for Romney_46:
(5, 32147), (Start: 45 @31877 has 144 MA's), (55, 31835), (73, 31745), (74, 31706), (78, 31658), (80, 31625),

Gene: Roosevelt_45 Start: 31882, Stop: 31580, Start Num: 45
Candidate Starts for Roosevelt_45:
(5, 32152), (Start: 45 @31882 has 144 MA's), (73, 31750), (74, 31711), (78, 31663), (80, 31630),

Gene: Rosa24_45 Start: 31911, Stop: 31609, Start Num: 45
Candidate Starts for Rosa24_45:
(5, 32181), (Start: 45 @31911 has 144 MA's), (55, 31869), (73, 31779), (74, 31740), (78, 31692), (80, 31659),

Gene: Rowdy_49 Start: 31547, Stop: 31209, Start Num: 38
Candidate Starts for Rowdy_49:
(Start: 38 @31547 has 11 MA's), (56, 31487), (72, 31382), (77, 31304),

Gene: Ruin_46 Start: 31873, Stop: 31571, Start Num: 45
Candidate Starts for Ruin_46:
(5, 32143), (Start: 45 @31873 has 144 MA's), (73, 31741), (74, 31702), (78, 31654), (80, 31621),

Gene: Sabertooth_46 Start: 31882, Stop: 31580, Start Num: 45
Candidate Starts for Sabertooth_46:
(5, 32152), (Start: 45 @31882 has 144 MA's), (73, 31750), (74, 31711), (78, 31663), (80, 31630),

Gene: Salz_46 Start: 31232, Stop: 30885, Start Num: 25
Candidate Starts for Salz_46:
(Start: 25 @31232 has 28 MA's), (33, 31199), (44, 31178), (78, 30965), (80, 30932),

Gene: Saskia_48 Start: 31226, Stop: 30879, Start Num: 25
Candidate Starts for Saskia_48:
(Start: 25 @31226 has 28 MA's), (33, 31193), (44, 31172), (53, 31139), (78, 30959), (80, 30926),

Gene: Scamp_46 Start: 31882, Stop: 31580, Start Num: 45
Candidate Starts for Scamp_46:
(5, 32152), (Start: 45 @31882 has 144 MA's), (73, 31750), (74, 31711), (78, 31663), (80, 31630),

Gene: SemperFi_48 Start: 32365, Stop: 31943, Start Num: 12
Candidate Starts for SemperFi_48:
(Start: 12 @32365 has 51 MA's), (Start: 15 @32356 has 81 MA's), (32, 32263), (46, 32233), (80, 31990),

Gene: SenorClean_46 Start: 31880, Stop: 31578, Start Num: 45
Candidate Starts for SenorClean_46:
(Start: 45 @31880 has 144 MA's), (73, 31748), (74, 31709), (78, 31661), (80, 31628),

Gene: Serenity_47 Start: 31249, Stop: 30842, Start Num: 15
Candidate Starts for Serenity_47:
(Start: 15 @31249 has 81 MA's), (59, 31066), (68, 31021), (78, 30922), (80, 30889),

Gene: Severus_43 Start: 30750, Stop: 30394, Start Num: 38
Candidate Starts for Severus_43:
(11, 30894), (Start: 38 @30750 has 11 MA's), (72, 30567), (77, 30489),

Gene: Shaka_46 Start: 31877, Stop: 31575, Start Num: 45
Candidate Starts for Shaka_46:
(5, 32147), (Start: 45 @31877 has 144 MA's), (73, 31745), (74, 31706), (78, 31658), (80, 31625),

Gene: Sham4_47 Start: 31260, Stop: 30913, Start Num: 25
Candidate Starts for Sham4_47:
(Start: 25 @31260 has 28 MA's), (33, 31227), (44, 31206), (78, 30993), (80, 30960),

Gene: Shapes_49 Start: 31547, Stop: 31209, Start Num: 38
Candidate Starts for Shapes_49:
(Start: 38 @31547 has 11 MA's), (56, 31487), (72, 31382), (77, 31304),

Gene: SheldonCooper_48 Start: 32303, Stop: 32001, Start Num: 45
Candidate Starts for SheldonCooper_48:
(5, 32573), (Start: 45 @32303 has 144 MA's), (73, 32171), (74, 32132), (80, 32051),

Gene: Shygu2_45 Start: 31853, Stop: 31530, Start Num: 45
Candidate Starts for Shygu2_45:
(Start: 45 @31853 has 144 MA's), (73, 31700), (74, 31661), (80, 31580),

Gene: Skadoosh_47 Start: 31877, Stop: 31575, Start Num: 45
Candidate Starts for Skadoosh_47:
(5, 32147), (Start: 45 @31877 has 144 MA's), (73, 31745), (74, 31706), (78, 31658), (80, 31625),

Gene: Skipitt_45 Start: 31874, Stop: 31572, Start Num: 45
Candidate Starts for Skipitt_45:
(5, 32144), (Start: 45 @31874 has 144 MA's), (73, 31742), (74, 31703), (78, 31655), (80, 31622),

Gene: Sknot_47 Start: 32181, Stop: 31747, Start Num: 15
Candidate Starts for Sknot_47:
(Start: 15 @32181 has 81 MA's), (31, 32082), (44, 32046), (80, 31794),

Gene: Smeagan_50 Start: 32817, Stop: 32395, Start Num: 12
Candidate Starts for Smeagan_50:
(Start: 12 @32817 has 51 MA's), (Start: 15 @32808 has 81 MA's), (32, 32715), (37, 32709), (46, 32685), (80, 32442),

Gene: SnapTap_47 Start: 32176, Stop: 31754, Start Num: 12
Candidate Starts for SnapTap_47:
(Start: 12 @32176 has 51 MA's), (Start: 15 @32167 has 81 MA's), (20, 32131), (Start: 27 @32089 has 1 MA's), (80, 31801),

Gene: Snape_47 Start: 31258, Stop: 30911, Start Num: 25
Candidate Starts for Snape_47:
(Start: 25 @31258 has 28 MA's), (33, 31225), (44, 31204), (78, 30991), (80, 30958),

Gene: Sparxx_47 Start: 31875, Stop: 31573, Start Num: 45
Candidate Starts for Sparxx_47:
(5, 32145), (Start: 45 @31875 has 144 MA's), (73, 31743), (74, 31704), (78, 31656), (80, 31623),

Gene: Spino_45 Start: 31880, Stop: 31578, Start Num: 45
Candidate Starts for Spino_45:
(5, 32150), (Start: 45 @31880 has 144 MA's), (73, 31748), (74, 31709), (78, 31661), (80, 31628),

Gene: StarStuff_49 Start: 31909, Stop: 31499, Start Num: 15
Candidate Starts for StarStuff_49:
(2, 32236), (3, 32224), (Start: 15 @31909 has 81 MA's), (Start: 45 @31789 has 144 MA's), (52, 31765), (54, 31759), (73, 31666), (78, 31579), (80, 31546),

Gene: Stasia_45 Start: 31752, Stop: 31450, Start Num: 45
Candidate Starts for Stasia_45:
(Start: 45 @31752 has 144 MA's), (78, 31533),

Gene: SteMason_45 Start: 31877, Stop: 31575, Start Num: 45
Candidate Starts for SteMason_45:
(5, 32147), (Start: 45 @31877 has 144 MA's), (73, 31745), (74, 31706), (78, 31658), (80, 31625),

Gene: Stink_46 Start: 32321, Stop: 31998, Start Num: 45
Candidate Starts for Stink_46:
(Start: 45 @32321 has 144 MA's), (49, 32306), (65, 32213), (67, 32198), (73, 32168), (77, 32093), (80, 32048),

Gene: Sultana_46 Start: 31880, Stop: 31578, Start Num: 45
Candidate Starts for Sultana_46:
(5, 32150), (Start: 45 @31880 has 144 MA's), (73, 31748), (74, 31709), (78, 31661), (80, 31628),

Gene: SuperAwesome_49 Start: 31148, Stop: 30720, Start Num: 15

Candidate Starts for SuperAwesome_49:
(Start: 9 @31175 has 3 MA's), (Start: 15 @31148 has 81 MA's), (30, 31052), (43, 31016), (63, 30926), (68, 30899), (69, 30896), (83, 30740),

Gene: SuperCallie99_48 Start: 31021, Stop: 30593, Start Num: 15
Candidate Starts for SuperCallie99_48:
(Start: 9 @31048 has 3 MA's), (Start: 15 @31021 has 81 MA's), (30, 30925), (43, 30889), (63, 30799), (68, 30772), (69, 30769), (83, 30613),

Gene: Superchunk_46 Start: 30723, Stop: 30316, Start Num: 15
Candidate Starts for Superchunk_46:
(Start: 15 @30723 has 81 MA's), (40, 30624), (66, 30510), (78, 30396), (80, 30363),

Gene: SweetiePie_47 Start: 32305, Stop: 31883, Start Num: 12
Candidate Starts for SweetiePie_47:
(Start: 12 @32305 has 51 MA's), (Start: 15 @32296 has 81 MA's), (32, 32203), (46, 32173), (80, 31930),

Gene: SwirlSquare_50 Start: 31390, Stop: 30980, Start Num: 15
Candidate Starts for SwirlSquare_50:
(Start: 15 @31390 has 81 MA's), (37, 31300), (41, 31285), (48, 31258), (52, 31246), (54, 31240), (61, 31195), (78, 31060), (80, 31027),

Gene: Taquarus_46 Start: 31883, Stop: 31581, Start Num: 45
Candidate Starts for Taquarus_46:
(5, 32153), (Start: 45 @31883 has 144 MA's), (73, 31751), (74, 31712), (78, 31664), (80, 31631),

Gene: TarsusIV_45 Start: 31964, Stop: 31542, Start Num: 12
Candidate Starts for TarsusIV_45:
(Start: 12 @31964 has 51 MA's), (42, 31847), (Start: 45 @31835 has 144 MA's), (80, 31589),

Gene: Temprado_50 Start: 31301, Stop: 30873, Start Num: 15
Candidate Starts for Temprado_50:
(Start: 9 @31328 has 3 MA's), (Start: 15 @31301 has 81 MA's), (30, 31205), (60, 31091), (69, 31049), (83, 30893),

Gene: Terrific_48 Start: 32535, Stop: 32101, Start Num: 15
Candidate Starts for Terrific_48:
(Start: 15 @32535 has 81 MA's), (31, 32436), (44, 32400), (80, 32148),

Gene: Thanksgivukkah_45 Start: 31878, Stop: 31576, Start Num: 45
Candidate Starts for Thanksgivukkah_45:
(5, 32148), (Start: 45 @31878 has 144 MA's), (73, 31746), (74, 31707), (78, 31659), (80, 31626),

Gene: Timothy_47 Start: 31235, Stop: 30888, Start Num: 25
Candidate Starts for Timothy_47:
(Start: 25 @31235 has 28 MA's), (33, 31202), (44, 31181), (78, 30968), (80, 30935),

Gene: TinaFeyge_46 Start: 31875, Stop: 31573, Start Num: 45
Candidate Starts for TinaFeyge_46:
(5, 32145), (Start: 45 @31875 has 144 MA's), (73, 31743), (74, 31704), (78, 31656), (80, 31623),

Gene: TinyTimmy_47 Start: 31278, Stop: 30931, Start Num: 25

Candidate Starts for TinyTimmy_47:
(Start: 25 @31278 has 28 MA's), (33, 31245), (44, 31224), (78, 31011), (80, 30978),

Gene: Tinybot_45 Start: 31907, Stop: 31605, Start Num: 45
Candidate Starts for Tinybot_45:
(5, 32177), (Start: 45 @31907 has 144 MA's), (73, 31775), (74, 31736), (78, 31688), (80, 31655),

Gene: TipsytheTRex_44 Start: 31322, Stop: 30915, Start Num: 15
Candidate Starts for TipsytheTRex_44:
(Start: 15 @31322 has 81 MA's), (59, 31139), (78, 30995), (80, 30962),

Gene: TiroTheta9_46 Start: 31874, Stop: 31572, Start Num: 45
Candidate Starts for TiroTheta9_46:
(5, 32144), (Start: 45 @31874 has 144 MA's), (73, 31742), (74, 31703), (78, 31655), (80, 31622),

Gene: Tomathan_49 Start: 31906, Stop: 31496, Start Num: 15
Candidate Starts for Tomathan_49:
(2, 32233), (3, 32221), (Start: 15 @31906 has 81 MA's), (Start: 45 @31786 has 144 MA's), (52, 31762), (54, 31756), (73, 31663), (78, 31576), (80, 31543),

Gene: ToneTone_46 Start: 30864, Stop: 30436, Start Num: 15
Candidate Starts for ToneTone_46:
(Start: 9 @30891 has 3 MA's), (Start: 15 @30864 has 81 MA's), (30, 30768), (60, 30654), (69, 30612), (83, 30456),

Gene: Travvers_49 Start: 31906, Stop: 31496, Start Num: 15
Candidate Starts for Travvers_49:
(2, 32233), (3, 32221), (Start: 15 @31906 has 81 MA's), (Start: 45 @31786 has 144 MA's), (52, 31762), (54, 31756), (73, 31663), (78, 31576), (80, 31543),

Gene: Trike_43 Start: 30758, Stop: 30402, Start Num: 38
Candidate Starts for Trike_43:
(11, 30902), (Start: 38 @30758 has 11 MA's), (72, 30575), (77, 30497),

Gene: Tristan_46 Start: 33143, Stop: 32727, Start Num: 13
Candidate Starts for Tristan_46:
(Start: 13 @33143 has 7 MA's), (19, 33113), (Start: 27 @33065 has 1 MA's), (50, 33002), (66, 32930), (80, 32774),

Gene: Trixie_45 Start: 32233, Stop: 31820, Start Num: 14
Candidate Starts for Trixie_45:
(Start: 14 @32233 has 7 MA's), (Start: 27 @32155 has 1 MA's), (35, 32137), (80, 31867),

Gene: Trooper_48 Start: 32526, Stop: 32104, Start Num: 12
Candidate Starts for Trooper_48:
(Start: 12 @32526 has 51 MA's), (Start: 15 @32517 has 81 MA's), (22, 32469), (Start: 27 @32439 has 1 MA's), (47, 32391), (49, 32382), (80, 32151),

Gene: TroyPia_47 Start: 31878, Stop: 31576, Start Num: 45
Candidate Starts for TroyPia_47:
(5, 32148), (Start: 45 @31878 has 144 MA's), (73, 31746), (74, 31707), (78, 31659), (80, 31626),

Gene: Tucker_49 Start: 30751, Stop: 30323, Start Num: 15

Candidate Starts for Tucker_49:
(Start: 9 @30778 has 3 MA's), (Start: 15 @30751 has 81 MA's), (30, 30655), (60, 30541), (69, 30499), (83, 30343),

Gene: Turbido_48 Start: 32560, Stop: 32138, Start Num: 12
Candidate Starts for Turbido_48:
(Start: 12 @32560 has 51 MA's), (Start: 15 @32551 has 81 MA's), (32, 32458), (46, 32428), (80, 32185),

Gene: TygerBlood_46 Start: 31880, Stop: 31578, Start Num: 45
Candidate Starts for TygerBlood_46:
(5, 32150), (Start: 45 @31880 has 144 MA's), (73, 31748), (74, 31709), (78, 31661), (80, 31628),

Gene: Ulysses_45 Start: 31557, Stop: 31255, Start Num: 45
Candidate Starts for Ulysses_45:
(5, 31827), (Start: 45 @31557 has 144 MA's), (73, 31425), (74, 31386), (78, 31338), (80, 31305),

Gene: Updawg_48 Start: 32422, Stop: 31988, Start Num: 15
Candidate Starts for Updawg_48:
(Start: 15 @32422 has 81 MA's), (31, 32323), (44, 32287), (80, 32035),

Gene: VA6_47 Start: 32280, Stop: 31867, Start Num: 12
Candidate Starts for VA6_47:
(Start: 12 @32280 has 51 MA's), (29, 32190), (37, 32181), (49, 32145), (62, 32079), (80, 31914),

Gene: VC3_50 Start: 32346, Stop: 31912, Start Num: 14
Candidate Starts for VC3_50:
(Start: 14 @32346 has 7 MA's), (Start: 15 @32343 has 81 MA's), (30, 32244), (Start: 45 @32202 has 144 MA's), (52, 32178), (73, 32079), (78, 31992), (80, 31959),

Gene: Wander_46 Start: 31877, Stop: 31575, Start Num: 45
Candidate Starts for Wander_46:
(Start: 45 @31877 has 144 MA's), (73, 31745), (74, 31706), (78, 31658), (80, 31625),

Gene: WeiHuaDA_47 Start: 33119, Stop: 32706, Start Num: 15
Candidate Starts for WeiHuaDA_47:
(Start: 15 @33119 has 81 MA's), (Start: 27 @33041 has 1 MA's), (Start: 45 @32999 has 144 MA's), (80, 32753),

Gene: Whabigail7_48 Start: 32545, Stop: 32123, Start Num: 12
Candidate Starts for Whabigail7_48:
(Start: 12 @32545 has 51 MA's), (Start: 15 @32536 has 81 MA's), (32, 32443), (37, 32437), (80, 32170),

Gene: WideWale_48 Start: 32422, Stop: 31988, Start Num: 15
Candidate Starts for WideWale_48:
(Start: 15 @32422 has 81 MA's), (31, 32323), (44, 32287), (80, 32035),

Gene: Wiks_48 Start: 30932, Stop: 30504, Start Num: 15
Candidate Starts for Wiks_48:
(Start: 9 @30959 has 3 MA's), (Start: 15 @30932 has 81 MA's), (30, 30836), (60, 30722), (69, 30680), (83, 30524),

Gene: Wilbur_46 Start: 31877, Stop: 31575, Start Num: 45
Candidate Starts for Wilbur_46:
(5, 32147), (Start: 45 @31877 has 144 MA's), (55, 31835), (73, 31745), (74, 31706), (78, 31658), (80, 31625),

Gene: Wile_45 Start: 31884, Stop: 31561, Start Num: 45
Candidate Starts for Wile_45:
(Start: 45 @31884 has 144 MA's), (64, 31785), (65, 31776), (67, 31761), (73, 31731), (80, 31611),

Gene: Wizard007_46 Start: 31885, Stop: 31583, Start Num: 45
Candidate Starts for Wizard007_46:
(5, 32155), (Start: 45 @31885 has 144 MA's), (73, 31753), (74, 31714), (78, 31666), (80, 31633),

Gene: Wolpertinger_46 Start: 31261, Stop: 30914, Start Num: 25
Candidate Starts for Wolpertinger_46:
(Start: 25 @31261 has 28 MA's), (33, 31228), (44, 31207), (78, 30994), (80, 30961),

Gene: WunderPhul_49 Start: 30930, Stop: 30502, Start Num: 15
Candidate Starts for WunderPhul_49:
(Start: 9 @30957 has 3 MA's), (Start: 15 @30930 has 81 MA's), (30, 30834), (60, 30720), (69, 30678), (83, 30522),

Gene: Xena_44 Start: 31850, Stop: 31527, Start Num: 45
Candidate Starts for Xena_44:
(Start: 45 @31850 has 144 MA's), (64, 31751), (65, 31742), (67, 31727), (73, 31697), (80, 31577),

Gene: YoSam321_46 Start: 31874, Stop: 31572, Start Num: 45
Candidate Starts for YoSam321_46:
(5, 32144), (Start: 45 @31874 has 144 MA's), (73, 31742), (74, 31703), (78, 31655), (80, 31622),

Gene: Yokurt_49 Start: 30959, Stop: 30504, Start Num: 9
Candidate Starts for Yokurt_49:
(Start: 9 @30959 has 3 MA's), (Start: 15 @30932 has 81 MA's), (30, 30836), (60, 30722), (69, 30680), (83, 30524),

Gene: Zaka_49 Start: 30932, Stop: 30504, Start Num: 15
Candidate Starts for Zaka_49:
(Start: 9 @30959 has 3 MA's), (Start: 15 @30932 has 81 MA's), (30, 30836), (60, 30722), (69, 30680), (83, 30524),

Gene: Zulu_49 Start: 30732, Stop: 30304, Start Num: 15
Candidate Starts for Zulu_49:
(Start: 9 @30759 has 3 MA's), (Start: 15 @30732 has 81 MA's), (30, 30636), (60, 30522), (69, 30480), (83, 30324),