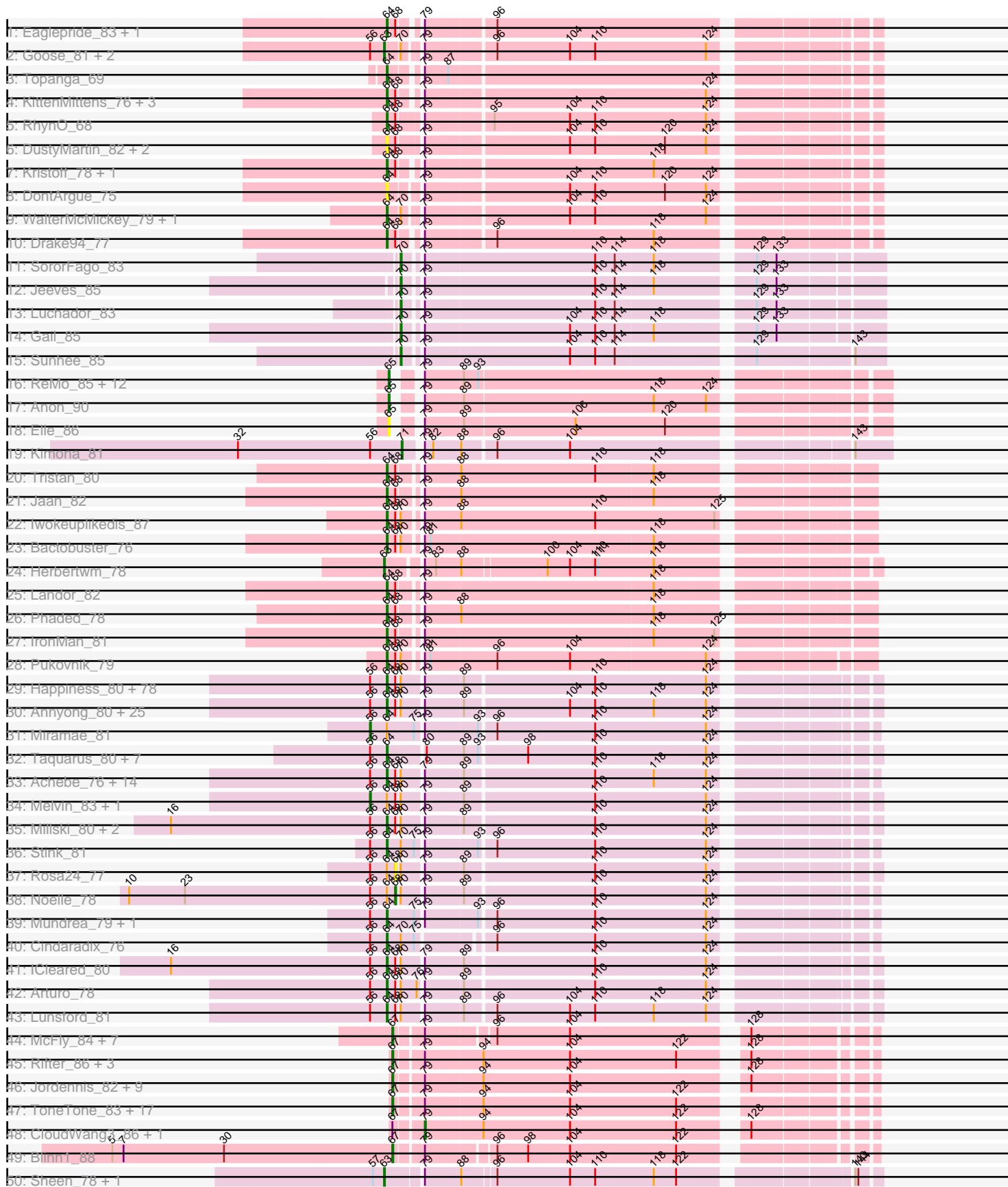
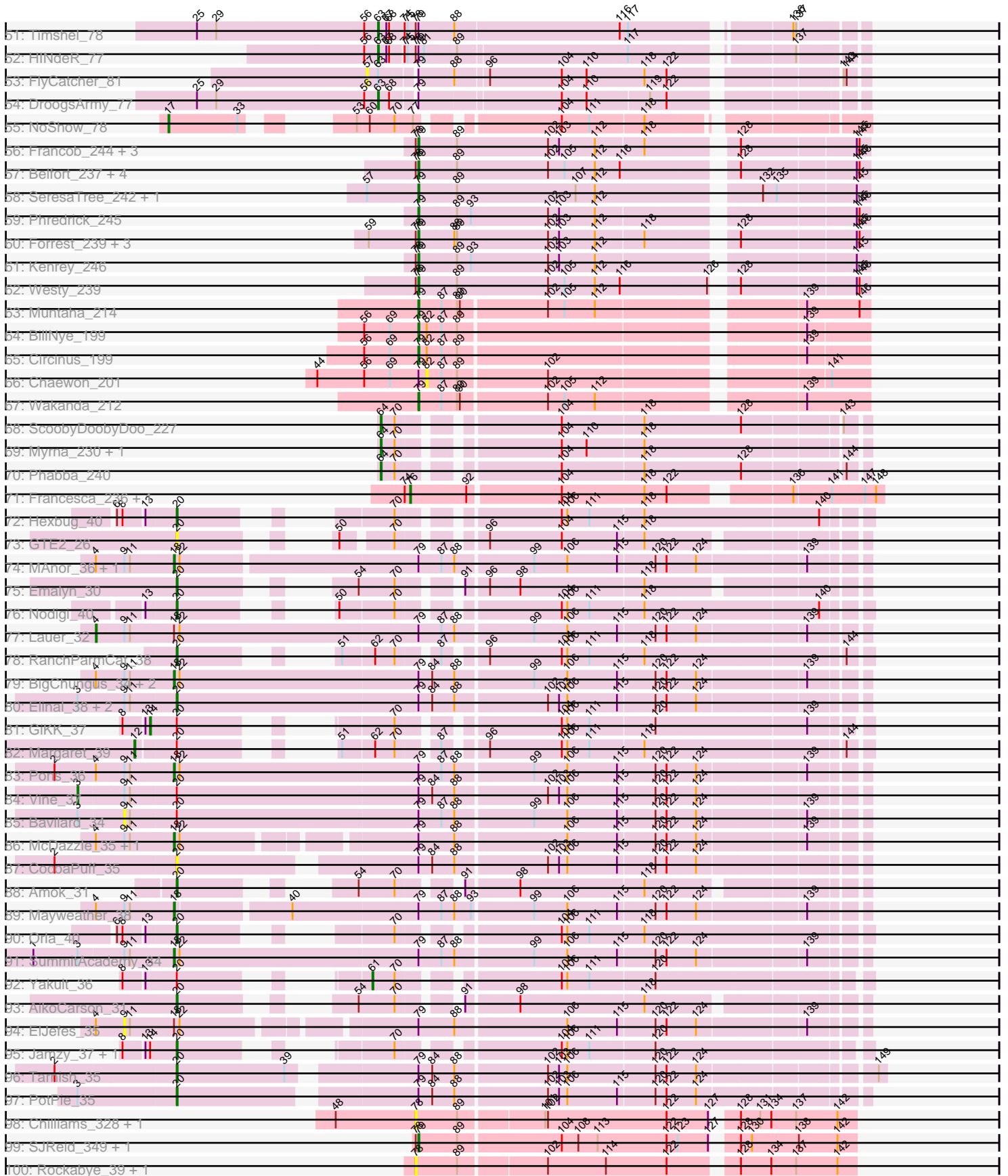


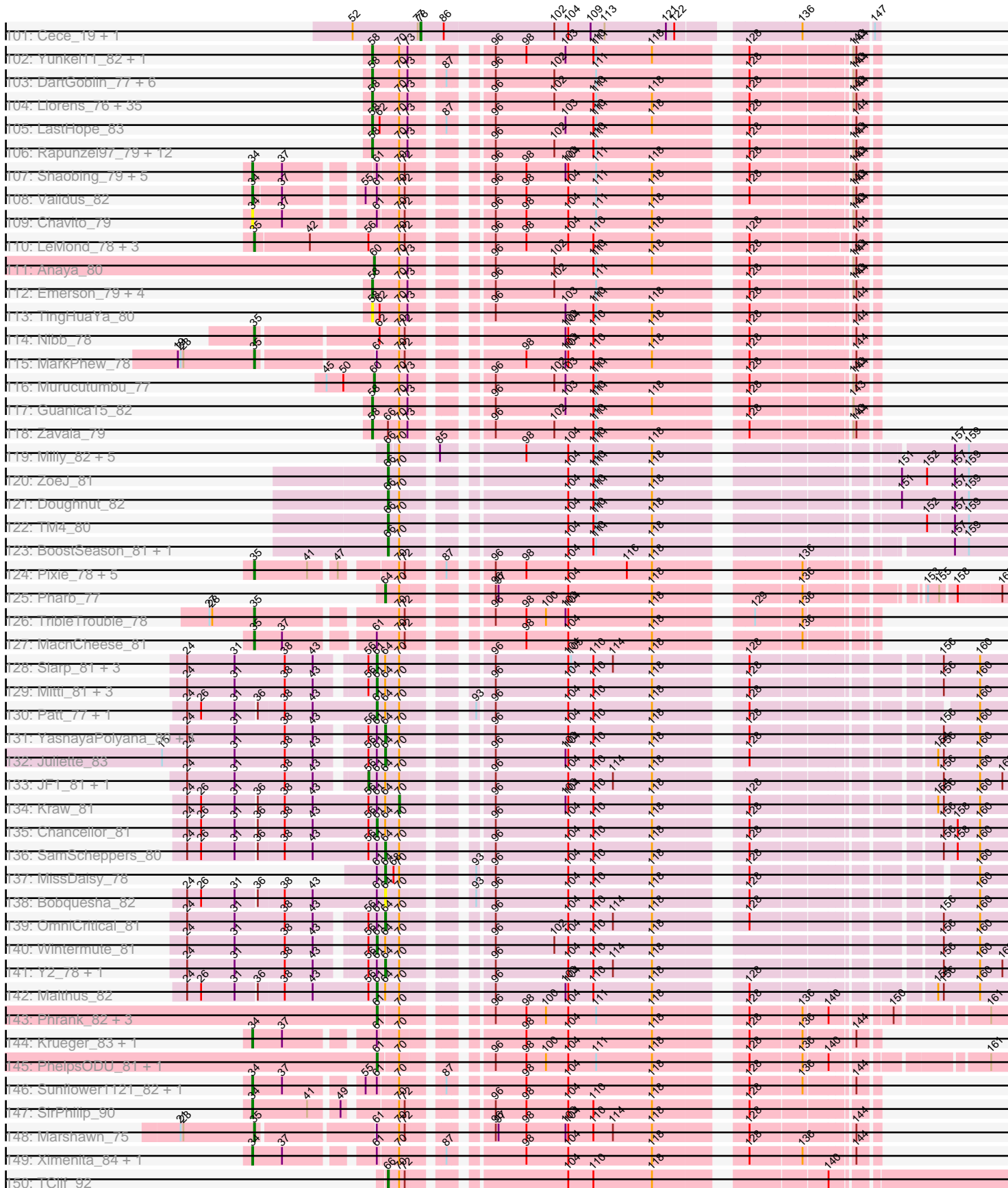
Pham 311069



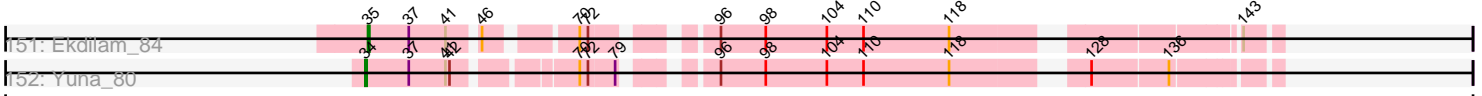
Pham 311069



Pham 311069



Pham 311069



A series of horizontal lines, likely representing a template for text or data entry, extending across the width of the page below the genomic map.

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 311069 Report

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

Pham number 311069 has 458 members, 35 are drafts.

Phages represented in each track:

- Track 1 : Eaglepride_83, Stasia_78
- Track 2 : Goose_81, Chupacabra_77, OKCentral2016_79
- Track 3 : Topanga_69
- Track 4 : KittenMittens_76, Poompha_77, Severus_78, PeaceMeal1_77
- Track 5 : RhynO_68
- Track 6 : DustyMartin_82, Shapes_82, Rowdy_82
- Track 7 : Kristoff_78, Rebeuca_81
- Track 8 : DontArgue_75
- Track 9 : WalterMcMickey_79, Twister_80
- Track 10 : Drake94_77
- Track 11 : SororFago_83
- Track 12 : Jeeves_85
- Track 13 : Luchador_83
- Track 14 : Gail_85
- Track 15 : Sunhee_85
- Track 16 : ReMo_85, MinecraftSteve_88, ShayRa_85, Boohoo_86, Battleship_90, Switzerland_85, LastResort_85, Anaysia_87, JSwag_87, KatherineG_87, Waits_87, DekHockey33_89, Nebulosus_84
- Track 17 : Anon_90
- Track 18 : Elle_86
- Track 19 : Kimona_81
- Track 20 : Tristan_80
- Track 21 : Jaan_82
- Track 22 : Iwokeuplikedis_87
- Track 23 : Bactobuster_76
- Track 24 : Herbertwm_78
- Track 25 : Landor_82
- Track 26 : Phaded_78
- Track 27 : IronMan_81
- Track 28 : Pukovnik_79
- Track 29 : Happiness_80, Eurydice_82, Chaph_81, Burger_79, LochMonster_82, Koreni_80, Bombshell_81, Romney_80, Mazhar510_81, JoongJeon_80, OKaNui_80, Wilbur_81, SenorClean_82, Felipe_81, KFPoly_80, Obama12_82, Huxley_73, KekoraPapaka_78, Funston_80, Phighter1804_81, Eris_80, CentreCat_81, Nebs_82, NotAPhaseMom_80, Lorenzo_81, SheldonCooper_81, Cerulean_83, Relief_80, Bruiser_80, Camperdownii_77, Medusa_80, SteMason_81, Scamp_81, Flux_82, Eapen_81, Caelakin_79, Eagle_80, Dhanush_81, Iceman_79, Shygu2_79,

YoSam321_81, ChampagnePapi_84, Kye_81, Palestino_80, Maverick_80, Spino_80, PeterPeter_81, Houdini22_80, Ulysses_80, Ruin_81, Cocoaberry_81, TygerBlood_81, Pipcraft_77, Avle17_81, LHTSCC_83, Phacado_81, Sabertooth_81, Kremtemulon_78, Xena_77, Tinybot_80, Ohfah_82, Kratark_80, Koan_78, NorthStar_78, Maxo_83, Cintron_81, Kamy_80, Gadost_81, Nemo27_80, Kingmustik0402_81, Lemur_81, Datway_78, BangNhom_78, Sultana_81, Wander_81, TroyPia_82, LittleB_81, Clarenza_80, Iracema64_81

- Track 30 : Anyong_80, Pumbaa_81, Polymorphads_82, Connomayer_81, TinaFeyge_79, Albee_81, Jaykayelowell_78, Florean_81, DirtyDunning_80, BubbleTrouble_80, Baby16_81, Sparxx_82, Roosevelt_79, TiroTheta9_80, JetBlade_82, LappelDuVide_81, Holli_80, Abdiel_80, Citius_81, Broseidon_81, Deano_78, Shaka_79, HamSlice_77, Morrow_83, Blackmoor_80, Bartimeaus_81
- Track 31 : Miramae_81
- Track 32 : Taquarus_80, RockieBear_78, LittleGuy_81, Nyxis_80, Eros_81, Phontbonne_81, Commander_79, Peaches_79
- Track 33 : Achebe_76, Morpher26_77, Wile_76, Alberto7_82, Katalie136_77, AbbysRanger_77, Perplexer_77, Backyardigan_75, Druantia_79, Badger_76, Wizard007_77, Bumblebee11_76, BellusTerra_81, Cici_77, PetiteSangsue_77
- Track 34 : Melvin_83, Skipitt_80
- Track 35 : Millski_80, Thanksgivukkah_80, MeeZee_80
- Track 36 : Stink_81
- Track 37 : Rosa24_77
- Track 38 : Noelle_78
- Track 39 : Mundrea_79, AvatarAhPeg_81
- Track 40 : Cindaradix_76
- Track 41 : ICleared_80
- Track 42 : Arturo_78
- Track 43 : Lunsford_81
- Track 44 : McFly_84, DaVinci_82, Cookiedough_84, Neeharika16_83, Chartreuse_83, Dorothea_84, Kipper29_84, BABullseye_77
- Track 45 : Rifter_86, Gruunaga_85, Hexamo_85, Gladiator_82
- Track 46 : Jordennis_82, Candra_82, Hoot_79, Pmask_83, Kazan_85, SuperAwesome_84, VohminGhazi_84, GreedyLawyer_78, Newrala_83, SmellyB_84
- Track 47 : ToneTone_83, Wiks_85, Artemis2UCLA_85, WunderPhul_86, Helmet_88, Temprado_87, Zulu_87, Lilbunny_85, Blue7_87, Roksolana_86, Zaka_86, BlessJoy_86, Tucker_86, Indra_89, Koko_87, Yokurt_85, BennyP_86, Garak_87
- Track 48 : CloudWang3_86, Hammer_86
- Track 49 : Blinn1_88
- Track 50 : Sheen_78, Toro_79
- Track 51 : Timshel_78
- Track 52 : HINdeR_77
- Track 53 : FlyCatcher_81
- Track 54 : DroogsArmy_77
- Track 55 : NoShow_78
- Track 56 : Francob_244, Maupel_243, Gilson_240, MeganTheeKilla_243
- Track 57 : Belfort_237, Comrade_233, Karp_236, SparkleGoddess_238, Stigma_236
- Track 58 : SeresaTree_242, Faust_238
- Track 59 : Phredrick_245
- Track 60 : Forrest_239, Emma1919_241, DeluluLabubu_241, Jada_238
- Track 61 : Kenrey_246
- Track 62 : Westy_239

- Track 63 : Muntaha_214
- Track 64 : BillNye_199
- Track 65 : Circinus_199
- Track 66 : Chaewon_201
- Track 67 : Wakanda_212
- Track 68 : ScoobyDoobyDoo_227
- Track 69 : Myrna_230, Greely_237
- Track 70 : Phabba_240
- Track 71 : Francesca_236, Dorin_235
- Track 72 : Hexbug_40
- Track 73 : GTE2_26
- Track 74 : MAnor_36, CherryonLim_37
- Track 75 : Emalyn_30
- Track 76 : Nodigi_40
- Track 77 : Lauer_32
- Track 78 : RanchParmCat_38
- Track 79 : BigChungus_34, Feastonyeet_34, Balloona_33
- Track 80 : Elinal_38, KayGee_36, Yucky_37
- Track 81 : GiKK_37
- Track 82 : Margaret_39
- Track 83 : Pons_36
- Track 84 : Vine_37
- Track 85 : Bavidard_34
- Track 86 : McDazzle_35, SheckWes_37
- Track 87 : CocoaPuff_35
- Track 88 : Amok_31
- Track 89 : Mayweather_38
- Track 90 : Orla_40
- Track 91 : SummitAcademy_34
- Track 92 : Yakult_36
- Track 93 : AikoCarson_31
- Track 94 : ElJefes_35
- Track 95 : Jamzy_37, Button_35
- Track 96 : Tarnish_35
- Track 97 : PotPie_35
- Track 98 : Chilliams_328, Chilliams_37
- Track 99 : SJReid_349, SJReid_40
- Track 100 : Rockabye_39, Rockabye_338
- Track 101 : Cece_19, Cece_321
- Track 102 : Yunkel11_82, Efra2_83
- Track 103 : DartGoblin_77, Anma_76, Bella96_77, TiniBug_76, SamuelLPlaqson_76, Urkel_76, DrHayes_76
- Track 104 : Llorens_76, CaseJules_78, Boiiii_76, BEEST_76, Asayake_76, Topper_76, Dalmuri_76, Twitch_76, Blizzard_76, Homura_75, ShiaSurprise_77, Joy99_77, Peel_76, Belladonna_76, AlishaPH_75, Jeckyll_76, HedwigODU_76, Atiba_77, Hyperbowlee_75, Durfee_76, Piatt_75, Capricorn_76, Tachez_76, Zabiza_72, CREW_75, Jarvi_76, Rosmarinus_76, Spock_76, Lunahalos_76, Adephegia_75, Padfoot_76, BaghaKamala_75, Inky_76, CallaLilly_76, ActinUp_77, BGlluvia_76
- Track 105 : LastHope_83
- Track 106 : Rapunzel97_79, Apocalypse_79, Slimphazie_78, BarrelRoll_77, TruffulaTree_78, CheetoDust_76, JAWS_75, Veliki_77, Deby_76, Mynx_78, Ramen_77, Pokerus_77, Jayhawk_79

- Track 107 : Shaobing_79, McMater_79, Richo_79, Niklas_80, Peanam_80, Dartin_79
- Track 108 : Validus_82
- Track 109 : Chavito_79
- Track 110 : LeMond_78, Oscar_78, Scarlett_79, KiSi_79
- Track 111 : Anaya_80
- Track 112 : Emerson_79, Prithvi_79, LindNT_75, Padpat_80, TreyKay_79
- Track 113 : TingHuaYa_80
- Track 114 : Nibb_78
- Track 115 : MarkPheW_78
- Track 116 : Murucutumbu_77
- Track 117 : Guanica15_82
- Track 118 : Zavala_79
- Track 119 : Milly_82, Strobilo_83, Marcoliusprime_81, DismalFunk_82, DismalStressor_82, Findley_82
- Track 120 : ZoeJ_81
- Track 121 : Doughnut_82
- Track 122 : TM4_80
- Track 123 : BoostSeason_81, Mufasa_81
- Track 124 : Pixie_78, ShedlockHolmes_81, TBond007_75, Lea83_79, Hurricane_79, Keshu_81
- Track 125 : Pharb_77
- Track 126 : TribbleTrouble_78
- Track 127 : MacnCheese_81
- Track 128 : Slarp_81, Cheetobro_81, Qhanda_83, Taquito_80
- Track 129 : Mitti_81, Eponine_83, DanSyl44_84, Fionnbharth_81
- Track 130 : Patt_77, Reptar3000_78
- Track 131 : YasnayaPolyana_80, Lebo14_80
- Track 132 : Juliette_83
- Track 133 : JF1_81, Ruthiejr_82
- Track 134 : Kraw_81
- Track 135 : Chancellor_81
- Track 136 : SamScheppers_80
- Track 137 : MissDaisy_78
- Track 138 : Bobquesha_82
- Track 139 : OmniCritical_81
- Track 140 : Wintermute_81
- Track 141 : Y2_78, Y10_78
- Track 142 : Malthus_82
- Track 143 : Phrank_82, Tierra_81, Bryler_82, Cain_82
- Track 144 : Krueger_83, Tigress9_83
- Track 145 : PhelpsODU_81, Unicorn_81
- Track 146 : Sunflower1121_82, Shadow1_83
- Track 147 : SirPhilip_90
- Track 148 : Marshawn_75
- Track 149 : Ximenita_84, Syra333_82
- Track 150 : TClif_92
- Track 151 : Ekdilam_84
- Track 152 : Yuna_80

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

The start number called the most often in the published annotations is 64, it was called in 169 of the 423 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AbbysRanger_77, Abdiel_80, Achebe_76, Albee_81, Alberto7_82, Annyong_80, Arturo_78, AvatarAhPeg_81, Avle17_81, Baby16_81, Backyardigan_75, Bactobuster_76, Badger_76, BangNhom_78, Bartimeaus_81, BellusTerra_81, Blackmoor_80, Bobquesha_82, Bombshell_81, Broseidon_81, Bruiser_80, BubbleTrouble_80, Bumblebee11_76, Burger_79, Caelakin_79, Camperdownii_77, CentreCat_81, Cerulean_83, ChampagnePapi_84, Chaph_81, Cici_77, Cindaradix_76, Cintron_81, Citius_81, Clarenza_80, Cocoaberry_81, Commander_79, Connomayer_81, Datway_78, Deano_78, Dhanush_81, DirtyDunning_80, DontArgue_75, Drake94_77, Druantia_79, DustyMartin_82, Eagle_80, Eaglepride_83, Eapen_81, Eris_80, Eros_81, Eurydice_82, Florean_81, Flux_82, Funston_80, Gadost_81, Greely_237, HamSlice_77, Happiness_80, Holli_80, Houdini22_80, Huxley_73, ICleared_80, Iceman_79, Iracema64_81, IronMan_81, Iwokeuplikedis_87, Jaan_82, Jaykayelowell_78, JetBlade_82, JoongJeon_80, Juliette_83, KFPoly_80, Kamy_80, Katalie136_77, KekoraPapaka_78, Kingmustik0402_81, KittenMittens_76, Koan_78, Koreni_80, Kratak_80, Kremtemulon_78, Kristoff_78, Kyee_81, LHTSCC_83, Landor_82, LappelDuVide_81, Lebo14_80, Lemur_81, LittleB_81, LittleGuy_81, LochMonster_82, Lorenzo_81, Lunsford_81, Maverick_80, Maxo_83, Mazhar510_81, Medusa_80, MeeZee_80, Millski_80, MissDaisy_78, Morpher26_77, Morrow_83, Mundrea_79, Myrna_230, Nebs_82, Nemo27_80, NorthStar_78, NotAPhaseMom_80, Nyxis_80, OKaNui_80, Obama12_82, Ohfah_82, OmniCritical_81, Palestino_80, PeaceMeal1_77, Peaches_79, Perplexer_77, PeterPeter_81, PetiteSangsue_77, Phabba_240, Phacado_81, Phaded_78, Pharb_77, Felipe_81, Phighter1804_81, Phontbonne_81, Pipcraft_77, Polymorphads_82, Poompha_77, Pukovnik_79, Pumbaa_81, Rebeuca_81, Relief_80, RhynO_68, RockieBear_78, Romney_80, Roosevelt_79, Rowdy_82, Ruin_81, Sabertooth_81, SamScheppers_80, Scamp_81, ScoobyDoobyDoo_227, SenorClean_82, Severus_78, Shaka_79, Shapes_82, SheldonCooper_81, Shygu2_79, Sparxx_82, Spino_80, Stasia_78, SteMason_81, Stink_81, Sultana_81, Taquarus_80, Thanksgivukkah_80, TinaFeyge_79, Tinybot_80, TiroTheta9_80, Topanga_69, Tristan_80, TroyPia_82, Twister_80, TygerBlood_81, Ulysses_80, WalterMcMickey_79, Wander_81, Wilbur_81, Wile_76, Wizard007_77, Xena_77, Y10_78, Y2_78, YasnayaPolyana_80, YoSam321_81,

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

- Chancellor_81, Cheetobro_81, DanSyl44_84, Eponine_83, Fionnbharth_81, JF1_81, Kraw_81, Malthus_82, Melvin_83, Miramae_81, Mitti_81, Noelle_78, Patt_77, Qhanda_83, Reptar3000_78, Rosa24_77, Ruthiejr_82, Skipitt_80, Slarp_81, Taquito_80, Wintermute_81,

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

- ActinUp_77, Adephegia_75, AikoCarson_31, AlishaPH_75, Amok_31, Anaya_80, Anaysia_87, Anma_76, Anon_90, Apocalypse_79, Artemis2UCLA_85, Asayake_76, Atiba_77, BABullseye_77, BEEST_76, BGlluviae_76, BaghaKamala_75, Balloona_33, BarrelRoll_77, Battleship_90, Bavidard_34, Belfort_237, Bella96_77, Belladonna_76, BennyP_86, BigChungus_34, BillNye_199, BlessJoy_86, Blinn1_88, Blizzard_76, Blue7_87, Boiiii_76, Boohoo_86, BoostSeason_81, Bryler_82, Button_35, CREW_75, Cain_82, CallaLilly_76, Candra_82, Capricorn_76, CaseJules_78, Cece_19, Cece_321, Chaewon_201, Chartreuse_83, Chavito_79,

CheetoDust_76, CherryonLim_37, Chilliams_328, Chilliams_37, Chupacabra_77, Circinus_199, CloudWang3_86, CocoaPuff_35, Comrade_233, Cookiedough_84, DaVinci_82, Dalmuri_76, DartGoblin_77, Dartin_79, Deby_76, DekHockey33_89, DeluluLabubu_241, DismalFunk_82, DismalStressor_82, Dorin_235, Dorothea_84, Doughnut_82, DrHayes_76, DroogsArmy_77, Durfee_76, Efra2_83, Ekdilam_84, ElJefes_35, Elinal_38, Elle_86, Emalyn_30, Emerson_79, Emma1919_241, Faust_238, Feastonyeet_34, Findley_82, FlyCatcher_81, Forrest_239, Francesca_236, Francob_244, GTE2_26, Gail_85, Garak_87, GiKK_37, Gilson_240, Gladiator_82, Goose_81, GreedyLawyer_78, Gruunaga_85, Guanica15_82, HINdeR_77, Hammer_86, HedwigODU_76, Helmet_88, Herbertwm_78, Hexamo_85, Hexbug_40, Homura_75, Hoot_79, Hurricane_79, Hyperbowlee_75, Indra_89, Inky_76, JAWS_75, JSwag_87, Jada_238, Jamzy_37, Jarvi_76, Jayhawk_79, Jeckyll_76, Jeeves_85, Jordennis_82, Joy99_77, Karp_236, KatherineG_87, KayGee_36, Kazan_85, Kenrey_246, Keshu_81, KiSi_79, Kimona_81, Kipper29_84, Koko_87, Krueger_83, LastHope_83, LastResort_85, Lauer_32, LeMond_78, Lea83_79, Lilbunny_85, LindNT_75, Llorens_76, Luchador_83, Lunahalos_76, MAnor_36, MacnCheese_81, Marcoliusprime_81, Margaret_39, MarkPhew_78, Marshawn_75, Maupel_243, Mayweather_38, McDazzle_35, McFly_84, McMater_79, MeganTheeKilla_243, Milly_82, MinecraftSteve_88, Mufasa_81, Muntaha_214, Murucutumbu_77, Mynx_78, Nebulosus_84, Neeharika16_83, Newrala_83, Nibb_78, Niklas_80, NoShow_78, Nodigi_40, OKCentral2016_79, Orla_40, Oscar_78, Padfoot_76, Padpat_80, Peanam_80, Peel_76, PhelpsODU_81, Phrank_82, Phredrick_245, Piatt_75, Pixie_78, Pmask_83, Pokerus_77, Pons_36, PotPie_35, Prithvi_79, Ramen_77, RanchParmCat_38, Rapunzel97_79, ReMo_85, Richo_79, Rifter_86, Rockabye_338, Rockabye_39, Roksolana_86, Rosmarinus_76, SJReid_349, SJReid_40, SamuelLPlaqson_76, Scarlett_79, SeresaTree_242, Shadow1_83, Shaobing_79, ShayRa_85, SheckWes_37, ShedlockHolmes_81, Sheen_78, ShiaSurprise_77, SirPhilip_90, Slimphazie_78, SmellyB_84, SororFago_83, SparkleGoddess_238, Spock_76, Stigma_236, Strobilo_83, SummitAcademy_34, Sunflower1121_82, Sunhee_85, SuperAwesome_84, Switzerland_85, Syra333_82, TBond007_75, TClif_92, TM4_80, Tachez_76, Tarnish_35, Temprado_87, Tierra_81, Tigress9_83, Timshel_78, TingHuaYa_80, TiniBug_76, ToneTone_83, Topper_76, Toro_79, TreyKay_79, TripleTrouble_78, TruffulaTree_78, Tucker_86, Twitch_76, Unicorn_81, Urkel_76, Validus_82, Veliki_77, Vine_37, VohminGhazi_84, Waits_87, Wakanda_212, Westy_239, Wiks_85, WunderPhul_86, Ximenita_84, Yakult_36, Yokurt_85, Yucky_37, Yuna_80, Yunkel11_82, Zabiza_72, Zaka_86, Zavala_79, ZoeJ_81, Zulu_87,

Summary by start number:

Start 3:

- Found in 7 of 458 (1.5%) of genes in pham
- Manual Annotations of this start: 1 of 423
- Called 14.3% of time when present
- Phage (with cluster) where this start called: Vine_37 (CT),

Start 4:

- Found in 11 of 458 (2.4%) of genes in pham
- Manual Annotations of this start: 1 of 423
- Called 9.1% of time when present
- Phage (with cluster) where this start called: Lauer_32 (CT),

Start 9:

- Found in 17 of 458 (3.7%) of genes in pham
- No Manual Annotations of this start.
- Called 11.8% of time when present
- Phage (with cluster) where this start called: Bavidard_34 (CT), ElJefes_35 (CT),

Start 12:

- Found in 1 of 458 (0.2%) of genes in pham
- Manual Annotations of this start: 1 of 423
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Margaret_39 (CT),

Start 14:

- Found in 3 of 458 (0.7%) of genes in pham
- Manual Annotations of this start: 1 of 423
- Called 33.3% of time when present
- Phage (with cluster) where this start called: GiKK_37 (CT),

Start 17:

- Found in 1 of 458 (0.2%) of genes in pham
- Manual Annotations of this start: 1 of 423
- Called 100.0% of time when present
- Phage (with cluster) where this start called: NoShow_78 (AB),

Start 18:

- Found in 12 of 458 (2.6%) of genes in pham
- Manual Annotations of this start: 8 of 423
- Called 83.3% of time when present
- Phage (with cluster) where this start called: Balloona_33 (CT), BigChungus_34 (CT), CherryonLim_37 (CT), Feastonyeet_34 (CT), MAnor_36 (CT), Mayweather_38 (CT), McDazzle_35 (CT), Pons_36 (CT), SheckWes_37 (CT), SummitAcademy_34 (CT),

Start 20:

- Found in 21 of 458 (4.6%) of genes in pham
- Manual Annotations of this start: 14 of 423
- Called 76.2% of time when present
- Phage (with cluster) where this start called: AikoCarson_31 (CT), Amok_31 (CT), Button_35 (CT), CocoaPuff_35 (CT), Elinal_38 (CT), Emalyn_30 (CT), GTE2_26 (CT), Hexbug_40 (CT), Jamzy_37 (CT), KayGee_36 (CT), Nodigi_40 (CT), Orla_40 (CT), PotPie_35 (CT), RanchParmCat_38 (CT), Tarnish_35 (CT), Yucky_37 (CT),

Start 34:

- Found in 16 of 458 (3.5%) of genes in pham
- Manual Annotations of this start: 12 of 423
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Chavito_79 (K1), Dartin_79 (K1), Krueger_83 (K6), McMater_79 (K1), Niklas_80 (K1), Peanam_80 (K1), Richo_79 (K1), Shadow1_83 (K6), Shaobing_79 (K1), SirPhilip_90 (K6), Sunflower1121_82 (K6), Syra333_82 (K6), Tigress9_83 (K6), Validus_82 (K1), Ximenita_84 (K6), Yuna_80 (K6),

Start 35:

- Found in 16 of 458 (3.5%) of genes in pham
- Manual Annotations of this start: 16 of 423

- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ekdilam_84 (K6), Hurricane_79 (K3), Keshu_81 (K3), KiSi_79 (K1), LeMond_78 (K1), Lea83_79 (K3), MacnCheese_81 (K3), MarkPheW_78 (K1), Marshawn_75 (K6), Nibb_78 (K1), Oscar_78 (K1), Pixie_78 (K3), Scarlett_79 (K1), ShedlockHolmes_81 (K3), TBond007_75 (K3), TribelTrouble_78 (K3),

Start 56:

- Found in 178 of 458 (38.9%) of genes in pham
- Manual Annotations of this start: 5 of 423
- Called 2.8% of time when present
- Phage (with cluster) where this start called: JF1_81 (K4), Melvin_83 (A4), Miramae_81 (A4), Ruthiejr_82 (K4), Skipitt_80 (A4),

Start 57:

- Found in 5 of 458 (1.1%) of genes in pham
- No Manual Annotations of this start.
- Called 20.0% of time when present
- Phage (with cluster) where this start called: FlyCatcher_81 (A7),

Start 58:

- Found in 67 of 458 (14.6%) of genes in pham
- Manual Annotations of this start: 65 of 423
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ActinUp_77 (K1), Adephagia_75 (K1), AlishaPH_75 (K1), Anma_76 (K1), Apocalypse_79 (K1), Asayake_76 (K1), Atiba_77 (K1), BEEST_76 (K1), BGlluviae_76 (K1), BaghaKamala_75 (K1), BarrelRoll_77 (K1), Bella96_77 (K1), Belladonna_76 (K1), Blizzard_76 (K1), Boiiii_76 (K1), CREW_75 (K1), CallaLilly_76 (K1), Capricorn_76 (K1), CaseJules_78 (K1), CheetoDust_76 (K1), Dalmuri_76 (K1), DartGoblin_77 (K1), Deby_76 (K1), DrHayes_76 (K1), Durfee_76 (K1), Efra2_83 (K1), Emerson_79 (K1), Guanica15_82 (K1), HedwigODU_76 (K1), Homura_75 (K1), Hyperbowlee_75 (K1), Inky_76 (K1), JAWS_75 (K1), Jarvi_76 (K1), Jayhawk_79 (K1), Jeckyll_76 (K1), Joy99_77 (K1), LastHope_83 (K1), LindNT_75 (K1), Llorens_76 (K1), Lunahalos_76 (K1), Mynx_78 (K1), Padfoot_76 (K1), Padpat_80 (K1), Peel_76 (K1), Piatt_75 (K1), Pokerus_77 (K1), Prithvi_79 (K1), Ramen_77 (K1), Rapunzel97_79 (K1), Rosmarinus_76 (K1), SamuelLPlaqson_76 (K1), ShiaSurprise_77 (K1), Slimphazie_78 (K1), Spock_76 (K1), Tachez_76 (K1), TingHuaYa_80 (K1), TiniBug_76 (K1), Topper_76 (K1), TreyKay_79 (K1), TruffulaTree_78 (K1), Twitch_76 (K1), Urkel_76 (K1), Veliki_77 (K1), Yunkel11_82 (K1), Zabiza_72 (K1), Zavala_79 (K1),

Start 60:

- Found in 3 of 458 (0.7%) of genes in pham
- Manual Annotations of this start: 2 of 423
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Anaya_80 (K1), Murucutumbu_77 (K1),

Start 61:

- Found in 49 of 458 (10.7%) of genes in pham
- Manual Annotations of this start: 18 of 423
- Called 40.8% of time when present
- Phage (with cluster) where this start called: Bryler_82 (K6), Cain_82 (K6), Chancellor_81 (K4), Cheetobro_81 (K4), DanSyl44_84 (K4), Eponine_83 (K4),

Fionnbharth_81 (K4), Malthus_82 (K4), Mitti_81 (K4), Patt_77 (K4), PhelpsODU_81 (K6), Phrank_82 (K6), Qhanda_83 (K4), Reptar3000_78 (K4), Slarp_81 (K4), Taquito_80 (K4), Tierra_81 (K6), Unicorn_81 (K6), Wintermute_81 (K4), Yakult_36 (CT),

Start 63:

- Found in 10 of 458 (2.2%) of genes in pham
- Manual Annotations of this start: 8 of 423
- Called 90.0% of time when present
- Phage (with cluster) where this start called: Chupacabra_77 (A10), DroogsArmy_77 (A7), Goose_81 (A10), HINdeR_77 (A7), Herbertwm_78 (A2), OKCentral2016_79 (A10), Sheen_78 (A7), Timshel_78 (A7), Toro_79 (A7),

Start 64:

- Found in 198 of 458 (43.2%) of genes in pham
- Manual Annotations of this start: 169 of 423
- Called 89.4% of time when present
- Phage (with cluster) where this start called: AbbysRanger_77 (A4), Abdiel_80 (A4), Achebe_76 (A4), Albee_81 (A4), Alberto7_82 (A4), Annyong_80 (A4), Arturo_78 (A4), AvatarAhPeg_81 (A4), Avle17_81 (A4), Baby16_81 (A4), Backyardigan_75 (A4), Bactobuster_76 (A2), Badger_76 (A4), BangNhom_78 (A4), Bartimeaus_81 (A4), BellusTerra_81 (A4), Blackmoor_80 (A4), Bobquesha_82 (K4), Bombshell_81 (A4), Broseidon_81 (A4), Bruiser_80 (A4), BubbleTrouble_80 (A4), Bumblebee11_76 (A4), Burger_79 (A4), Caelakin_79 (A4), Camperdownii_77 (A4), CentreCat_81 (A4), Cerulean_83 (A4), ChampagnePapi_84 (A4), Chaph_81 (A4), Cici_77 (A4), Cindaradix_76 (A4), Cintron_81 (A4), Citius_81 (A4), Clarenza_80 (A4), Cocoaberry_81 (A4), Commander_79 (A4), Connomayer_81 (A4), Datway_78 (A4), Deano_78 (A4), Dhanush_81 (A4), DirtyDunning_80 (A4), DontArgue_75 (A10), Drake94_77 (A10), Druantia_79 (A4), DustyMartin_82 (A10), Eagle_80 (A4), Eaglepride_83 (A10), Eapen_81 (A4), Eris_80 (A4), Eros_81 (A4), Eurydice_82 (A4), Florean_81 (A4), Flux_82 (A4), Funston_80 (A4), Gadost_81 (A4), Greely_237 (C2), HamSlice_77 (A4), Happiness_80 (A4), Holli_80 (A4), Houdini22_80 (A4), Huxley_73 (A4), ICleared_80 (A4), Iceman_79 (A4), Iracema64_81 (A4), IronMan_81 (A2), Iwokeuplikedis_87 (A2), Jaan_82 (A2), Jaykayelowell_78 (A4), JetBlade_82 (A4), JoongJeon_80 (A4), Juliette_83 (K4), KFPoly_80 (A4), Kampy_80 (A4), Katalie136_77 (A4), KekoraPapaka_78 (A4), Kingmustik0402_81 (A4), KittenMittens_76 (A10), Koan_78 (A4), Koreni_80 (A4), Kratark_80 (A4), Kremtemulon_78 (A4), Kristoff_78 (A10), Kyee_81 (A4), LHTSCC_83 (A4), Landor_82 (A2), LappelDuVide_81 (A4), Lebo14_80 (K4), Lemur_81 (A4), LittleB_81 (A4), LittleGuy_81 (A4), LochMonster_82 (A4), Lorenzo_81 (A4), Lunsford_81 (A4), Maverick_80 (A4), Maxo_83 (A4), Mazhar510_81 (A4), Medusa_80 (A4), MeeZee_80 (A4), Millski_80 (A4), MissDaisy_78 (K4), Morpher26_77 (A4), Morrow_83 (A4), Mundrea_79 (A4), Myrna_230 (C2), Nebs_82 (A4), Nemo27_80 (A4), NorthStar_78 (A4), NotAPhaseMom_80 (A4), Nyxis_80 (A4), OKaNui_80 (A4), Obama12_82 (A4), Ohfah_82 (A4), OmniCritical_81 (K4), Palestino_80 (A4), PeaceMeal1_77 (A10), Peaches_79 (A4), Perplexer_77 (A4), PeterPeter_81 (A4), PetiteSangsue_77 (A4), Phabba_240 (C2), Phacado_81 (A4), Phaded_78 (A2), Pharb_77 (K3), Phelipe_81 (A4), Phighter1804_81 (A4), Phontbonne_81 (A4), Pipcraft_77 (A4), Polymorphads_82 (A4), Poompha_77 (A10), Pukovnik_79 (A2), Pumbaa_81 (A4), Rebeuca_81 (A10), Relief_80 (A4), RhynO_68 (A10), RockieBear_78 (A4), Romney_80 (A4), Roosevelt_79 (A4), Rowdy_82 (A10), Ruin_81 (A4), Sabertooth_81 (A4), SamScheppers_80 (K4), Scamp_81 (A4), ScoobyDoobyDoo_227 (C2), SenorClean_82 (A4), Severus_78 (A10), Shaka_79 (A4), Shapes_82 (A10),

SheldonCooper_81 (A4), Shygu2_79 (A4), Sparxx_82 (A4), Spino_80 (A4), Stasia_78 (A4), SteMason_81 (A4), Stink_81 (A4), Sultana_81 (A4), Taquarus_80 (A4), Thanksgivukkah_80 (A4), TinaFeyge_79 (A4), Tinybot_80 (A4), TiroTheta9_80 (A4), Topanga_69 (A10), Tristan_80 (A2), TroyPia_82 (A4), Twister_80 (A10), TygerBlood_81 (A4), Ulysses_80 (A4), WalterMcMickey_79 (A10), Wander_81 (A4), Wilbur_81 (A4), Wile_76 (A4), Wizard007_77 (A4), Xena_77 (A4), Y10_78 (K4), Y2_78 (K4), YasnayaPolyana_80 (K4), YoSam321_81 (A4),

Start 65:

- Found in 15 of 458 (3.3%) of genes in pham
- Manual Annotations of this start: 14 of 423
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Anaysia_87 (A15), Anon_90 (A15), Battleship_90 (A15), Boohoo_86 (A15), DekHockey33_89 (A15), Elle_86 (A15), JSwag_87 (A15), KatherineG_87 (A15), LastResort_85 (A15), MinecraftSteve_88 (A15), Nebulosus_84 (A15), ReMo_85 (A15), ShayRa_85 (A15), Switzerland_85 (A15), Waits_87 (A15),

Start 66:

- Found in 13 of 458 (2.8%) of genes in pham
- Manual Annotations of this start: 12 of 423
- Called 92.3% of time when present
- Phage (with cluster) where this start called: BoostSeason_81 (K2), DismalFunk_82 (K2), DismalStressor_82 (K2), Doughnut_82 (K2), Findley_82 (K2), Marcoliusprime_81 (K2), Milly_82 (K2), Mufasa_81 (K2), Strobilo_83 (K2), TClif_92 (K6), TM4_80 (K2), ZoeJ_81 (K2),

Start 67:

- Found in 45 of 458 (9.8%) of genes in pham
- Manual Annotations of this start: 39 of 423
- Called 91.1% of time when present
- Phage (with cluster) where this start called: Artemis2UCLA_85 (A6), BABullseye_77 (A6), BennyP_86 (A6), BlessJoy_86 (A6), Blinn1_88 (A6), Blue7_87 (A6), Candra_82 (A6), Chartreuse_83 (A6), Cookiedough_84 (A6), DaVinci_82 (A6), Dorothea_84 (A6), Garak_87 (A6), Gladiator_82 (A6), GreedyLawyer_78 (A6), Gruunaga_85 (A6), Helmet_88 (A6), Hexamo_85 (A6), Hoot_79 (A6), Indra_89 (A6), Jordennis_82 (A6), Kazan_85 (A6), Kipper29_84 (A6), Koko_87 (A6), Lilbunny_85 (A6), McFly_84 (A6), Neeharika16_83 (A6), Newwala_83 (A6), Pmask_83 (A6), Rifter_86 (A6), Roksolana_86 (A6), SmellyB_84 (A6), SuperAwesome_84 (A6), Temprado_87 (A6), ToneTone_83 (A6), Tucker_86 (A6), VohminGhazi_84 (A6), Wiks_85 (A6), WunderPhul_86 (A6), Yokurt_85 (A6), Zaka_86 (A6), Zulu_87 (A6),

Start 68:

- Found in 155 of 458 (33.8%) of genes in pham
- Manual Annotations of this start: 1 of 423
- Called 1.3% of time when present
- Phage (with cluster) where this start called: Noelle_78 (A4), Rosa24_77 (A4),

Start 70:

- Found in 308 of 458 (67.2%) of genes in pham
- Manual Annotations of this start: 6 of 423
- Called 1.9% of time when present

- Phage (with cluster) where this start called: Gail_85 (A14), Jeeves_85 (A14), Kraw_81 (K4), Luchador_83 (A14), SororFago_83 (A14), Sunhee_85 (A14),

Start 71:

- Found in 1 of 458 (0.2%) of genes in pham
- Manual Annotations of this start: 1 of 423
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kimona_81 (A19),

Start 76:

- Found in 3 of 458 (0.7%) of genes in pham
- Manual Annotations of this start: 2 of 423
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Dorin_235 (CG), Francesca_236 (CG),

Start 78:

- Found in 25 of 458 (5.5%) of genes in pham
- Manual Annotations of this start: 2 of 423
- Called 24.0% of time when present
- Phage (with cluster) where this start called: Cece_19 (GD3), Cece_321 (GD3), Chilliams_328 (FC), Chilliams_37 (FC), Rockabye_338 (FC), Rockabye_39 (FC),

Start 79:

- Found in 279 of 458 (60.9%) of genes in pham
- Manual Annotations of this start: 24 of 423
- Called 9.3% of time when present
- Phage (with cluster) where this start called: Belfort_237 (BK1), BillNye_199 (BK2), Circinus_199 (BK2), CloudWang3_86 (A6), Comrade_233 (BK1), DeluluLabubu_241 (BK1), Emma1919_241 (BK1), Faust_238 (BK1), Forrest_239 (BK1), Francob_244 (BK1), Gilson_240 (BK1), Hammer_86 (A6), Jada_238 (BK1), Karp_236 (BK1), Kenrey_246 (BK1), Maupel_243 (BK1), MeganTheeKilla_243 (BK1), Muntaha_214 (BK2), Phredrick_245 (BK1), SJReid_349 (FC), SJReid_40 (FC), SeresaTree_242 (BK1), SparkleGoddess_238 (BK1), Stigma_236 (BK1), Wakanda_212 (BK2), Westy_239 (BK1),

Start 82:

- Found in 4 of 458 (0.9%) of genes in pham
- No Manual Annotations of this start.
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Chaewon_201 (BK2),

Summary by clusters:

There are 21 clusters represented in this pham: A15, A7, GD3, A10, A14, FC, CG, K4, A19, K3, K2, K1, A2, BK2, K6, BK1, A6, C2, CT, AB, A4,

Info for manual annotations of cluster A10:

- Start number 63 was manually annotated 3 times for cluster A10.
- Start number 64 was manually annotated 12 times for cluster A10.

Info for manual annotations of cluster A14:

- Start number 70 was manually annotated 5 times for cluster A14.

Info for manual annotations of cluster A15:

- Start number 65 was manually annotated 14 times for cluster A15.

Info for manual annotations of cluster A19:

- Start number 71 was manually annotated 1 time for cluster A19.

Info for manual annotations of cluster A2:

- Start number 63 was manually annotated 1 time for cluster A2.
- Start number 64 was manually annotated 8 times for cluster A2.

Info for manual annotations of cluster A4:

- Start number 56 was manually annotated 3 times for cluster A4.
- Start number 64 was manually annotated 137 times for cluster A4.
- Start number 68 was manually annotated 1 time for cluster A4.

Info for manual annotations of cluster A6:

- Start number 67 was manually annotated 39 times for cluster A6.
- Start number 79 was manually annotated 2 times for cluster A6.

Info for manual annotations of cluster A7:

- Start number 63 was manually annotated 4 times for cluster A7.

Info for manual annotations of cluster AB:

- Start number 17 was manually annotated 1 time for cluster AB.

Info for manual annotations of cluster BK1:

- Start number 79 was manually annotated 16 times for cluster BK1.

Info for manual annotations of cluster BK2:

- Start number 79 was manually annotated 4 times for cluster BK2.

Info for manual annotations of cluster C2:

- Start number 64 was manually annotated 3 times for cluster C2.

Info for manual annotations of cluster CG:

- Start number 76 was manually annotated 2 times for cluster CG.

Info for manual annotations of cluster CT:

- Start number 3 was manually annotated 1 time for cluster CT.
- Start number 4 was manually annotated 1 time for cluster CT.
- Start number 12 was manually annotated 1 time for cluster CT.
- Start number 14 was manually annotated 1 time for cluster CT.
- Start number 18 was manually annotated 8 times for cluster CT.
- Start number 20 was manually annotated 14 times for cluster CT.
- Start number 61 was manually annotated 1 time for cluster CT.

Info for manual annotations of cluster FC:

- Start number 79 was manually annotated 2 times for cluster FC.

Info for manual annotations of cluster GD3:

- Start number 78 was manually annotated 2 times for cluster GD3.

Info for manual annotations of cluster K1:

- Start number 34 was manually annotated 4 times for cluster K1.
- Start number 35 was manually annotated 6 times for cluster K1.
- Start number 58 was manually annotated 65 times for cluster K1.
- Start number 60 was manually annotated 2 times for cluster K1.

Info for manual annotations of cluster K2:

- Start number 66 was manually annotated 11 times for cluster K2.

Info for manual annotations of cluster K3:

- Start number 35 was manually annotated 8 times for cluster K3.
- Start number 64 was manually annotated 1 time for cluster K3.

Info for manual annotations of cluster K4:

- Start number 56 was manually annotated 2 times for cluster K4.
- Start number 61 was manually annotated 11 times for cluster K4.
- Start number 64 was manually annotated 8 times for cluster K4.
- Start number 70 was manually annotated 1 time for cluster K4.

Info for manual annotations of cluster K6:

- Start number 34 was manually annotated 8 times for cluster K6.
- Start number 35 was manually annotated 2 times for cluster K6.
- Start number 61 was manually annotated 6 times for cluster K6.
- Start number 66 was manually annotated 1 time for cluster K6.

Gene Information:

Gene: AbbysRanger_77 Start: 47535, Stop: 47068, Start Num: 64

Candidate Starts for AbbysRanger_77:

(Start: 56 @47553 has 5 MA's), (Start: 64 @47535 has 169 MA's), (Start: 68 @47526 has 1 MA's), (Start: 70 @47523 has 6 MA's), (Start: 79 @47505 has 24 MA's), (89, 47466), (110, 47331), (118, 47268), (124, 47214),

Gene: Abdiel_80 Start: 47911, Stop: 47441, Start Num: 64

Candidate Starts for Abdiel_80:

(Start: 56 @47929 has 5 MA's), (Start: 64 @47911 has 169 MA's), (Start: 68 @47902 has 1 MA's), (Start: 70 @47899 has 6 MA's), (Start: 79 @47881 has 24 MA's), (89, 47842), (104, 47734), (110, 47707), (118, 47644), (124, 47590),

Gene: Achebe_76 Start: 47514, Stop: 47047, Start Num: 64

Candidate Starts for Achebe_76:

(Start: 56 @47532 has 5 MA's), (Start: 64 @47514 has 169 MA's), (Start: 68 @47505 has 1 MA's), (Start: 70 @47502 has 6 MA's), (Start: 79 @47484 has 24 MA's), (89, 47445), (110, 47310), (118, 47247), (124, 47193),

Gene: ActinUp_77 Start: 50506, Stop: 50967, Start Num: 58

Candidate Starts for ActinUp_77:

(Start: 58 @50506 has 65 MA's), (Start: 70 @50533 has 6 MA's), (73, 50542), (96, 50602), (102, 50665), (110, 50707), (111, 50710), (118, 50770), (128, 50848), (143, 50944), (144, 50947),

Gene: Adephagia_75 Start: 50343, Stop: 50804, Start Num: 58

Candidate Starts for Adephagia_75:

(Start: 65 @48046 has 14 MA's), (Start: 79 @48034 has 24 MA's), (89, 47995), (118, 47794), (124, 47740),

Gene: Apocalypse_79 Start: 51145, Stop: 51606, Start Num: 58

Candidate Starts for Apocalypse_79:

(Start: 58 @51145 has 65 MA's), (Start: 70 @51172 has 6 MA's), (73, 51181), (96, 51241), (102, 51304), (110, 51346), (111, 51349), (128, 51487), (143, 51583), (144, 51586),

Gene: Artemis2UCLA_85 Start: 46023, Stop: 45562, Start Num: 67

Candidate Starts for Artemis2UCLA_85:

(Start: 67 @46023 has 39 MA's), (Start: 79 @45996 has 24 MA's), (94, 45936), (104, 45843), (122, 45729),

Gene: Arturo_78 Start: 48027, Stop: 47557, Start Num: 64

Candidate Starts for Arturo_78:

(Start: 56 @48045 has 5 MA's), (Start: 64 @48027 has 169 MA's), (Start: 68 @48018 has 1 MA's), (Start: 70 @48015 has 6 MA's), (Start: 76 @48000 has 2 MA's), (Start: 79 @47997 has 24 MA's), (89, 47958), (110, 47823), (124, 47706),

Gene: Asayake_76 Start: 50658, Stop: 51119, Start Num: 58

Candidate Starts for Asayake_76:

(Start: 58 @50658 has 65 MA's), (Start: 70 @50685 has 6 MA's), (73, 50694), (96, 50754), (102, 50817), (110, 50859), (111, 50862), (118, 50922), (128, 51000), (143, 51096), (144, 51099),

Gene: Atiba_77 Start: 50306, Stop: 50767, Start Num: 58

Candidate Starts for Atiba_77:

(Start: 58 @50306 has 65 MA's), (Start: 70 @50333 has 6 MA's), (73, 50342), (96, 50402), (102, 50465), (110, 50507), (111, 50510), (118, 50570), (128, 50648), (143, 50744), (144, 50747),

Gene: AvatarAhPeg_81 Start: 48152, Stop: 47682, Start Num: 64

Candidate Starts for AvatarAhPeg_81:

(Start: 56 @48170 has 5 MA's), (Start: 64 @48152 has 169 MA's), (75, 48125), (Start: 79 @48119 has 24 MA's), (93, 48065), (96, 48050), (110, 47945), (124, 47828),

Gene: Avle17_81 Start: 47893, Stop: 47423, Start Num: 64

Candidate Starts for Avle17_81:

(Start: 56 @47911 has 5 MA's), (Start: 64 @47893 has 169 MA's), (Start: 68 @47884 has 1 MA's), (Start: 70 @47881 has 6 MA's), (Start: 79 @47863 has 24 MA's), (89, 47824), (110, 47689), (124, 47572),

Gene: BABullseye_77 Start: 44344, Stop: 43892, Start Num: 67

Candidate Starts for BABullseye_77:

(Start: 67 @44344 has 39 MA's), (Start: 79 @44317 has 24 MA's), (96, 44251), (104, 44173), (128, 44005),

Gene: BEEST_76 Start: 50658, Stop: 51119, Start Num: 58

Candidate Starts for BEEST_76:

(Start: 58 @50658 has 65 MA's), (Start: 70 @50685 has 6 MA's), (73, 50694), (96, 50754), (102, 50817), (110, 50859), (111, 50862), (118, 50922), (128, 51000), (143, 51096), (144, 51099),

Gene: BGlluviae_76 Start: 50461, Stop: 50922, Start Num: 58

Candidate Starts for BGlluviae_76:

Gene: Bruiser_80 Start: 47899, Stop: 47429, Start Num: 64

Candidate Starts for Bruiser_80:

(Start: 56 @47917 has 5 MA's), (Start: 64 @47899 has 169 MA's), (Start: 68 @47890 has 1 MA's), (Start: 70 @47887 has 6 MA's), (Start: 79 @47869 has 24 MA's), (89, 47830), (110, 47695), (124, 47578),

Gene: Bryler_82 Start: 50964, Stop: 51536, Start Num: 61

Candidate Starts for Bryler_82:

(Start: 61 @50964 has 18 MA's), (Start: 70 @50985 has 6 MA's), (96, 51054), (98, 51087), (100, 51108), (104, 51132), (111, 51162), (118, 51222), (128, 51300), (136, 51354), (140, 51378), (150, 51429), (161, 51516),

Gene: BubbleTrouble_80 Start: 47926, Stop: 47456, Start Num: 64

Candidate Starts for BubbleTrouble_80:

(Start: 56 @47944 has 5 MA's), (Start: 64 @47926 has 169 MA's), (Start: 68 @47917 has 1 MA's), (Start: 70 @47914 has 6 MA's), (Start: 79 @47896 has 24 MA's), (89, 47857), (104, 47749), (110, 47722), (118, 47659), (124, 47605),

Gene: Bumblebee11_76 Start: 47517, Stop: 47050, Start Num: 64

Candidate Starts for Bumblebee11_76:

(Start: 56 @47535 has 5 MA's), (Start: 64 @47517 has 169 MA's), (Start: 68 @47508 has 1 MA's), (Start: 70 @47505 has 6 MA's), (Start: 79 @47487 has 24 MA's), (89, 47448), (110, 47313), (118, 47250), (124, 47196),

Gene: Burger_79 Start: 47899, Stop: 47429, Start Num: 64

Candidate Starts for Burger_79:

(Start: 56 @47917 has 5 MA's), (Start: 64 @47899 has 169 MA's), (Start: 68 @47890 has 1 MA's), (Start: 70 @47887 has 6 MA's), (Start: 79 @47869 has 24 MA's), (89, 47830), (110, 47695), (124, 47578),

Gene: Button_35 Start: 26057, Stop: 25458, Start Num: 20

Candidate Starts for Button_35:

(8, 26108), (13, 26087), (Start: 14 @26084 has 1 MA's), (Start: 20 @26057 has 14 MA's), (Start: 70 @25916 has 6 MA's), (104, 25769), (106, 25763), (111, 25739), (120, 25670),

Gene: CREW_75 Start: 50461, Stop: 50922, Start Num: 58

Candidate Starts for CREW_75:

(Start: 58 @50461 has 65 MA's), (Start: 70 @50488 has 6 MA's), (73, 50497), (96, 50557), (102, 50620), (110, 50662), (111, 50665), (118, 50725), (128, 50803), (143, 50899), (144, 50902),

Gene: Caelakin_79 Start: 47899, Stop: 47429, Start Num: 64

Candidate Starts for Caelakin_79:

(Start: 56 @47917 has 5 MA's), (Start: 64 @47899 has 169 MA's), (Start: 68 @47890 has 1 MA's), (Start: 70 @47887 has 6 MA's), (Start: 79 @47869 has 24 MA's), (89, 47830), (110, 47695), (124, 47578),

Gene: Cain_82 Start: 50952, Stop: 51524, Start Num: 61

Candidate Starts for Cain_82:

(Start: 61 @50952 has 18 MA's), (Start: 70 @50973 has 6 MA's), (96, 51042), (98, 51075), (100, 51096), (104, 51120), (111, 51150), (118, 51210), (128, 51288), (136, 51342), (140, 51366), (150, 51417), (161, 51504),

Gene: CallaLilly_76 Start: 50384, Stop: 50845, Start Num: 58

Gene: Datway_78 Start: 47710, Stop: 47240, Start Num: 64

Candidate Starts for Datway_78:

(Start: 56 @47728 has 5 MA's), (Start: 64 @47710 has 169 MA's), (Start: 68 @47701 has 1 MA's), (Start: 70 @47698 has 6 MA's), (Start: 79 @47680 has 24 MA's), (89, 47641), (110, 47506), (124, 47389),

Gene: Deano_78 Start: 47907, Stop: 47437, Start Num: 64

Candidate Starts for Deano_78:

(Start: 56 @47925 has 5 MA's), (Start: 64 @47907 has 169 MA's), (Start: 68 @47898 has 1 MA's), (Start: 70 @47895 has 6 MA's), (Start: 79 @47877 has 24 MA's), (89, 47838), (104, 47730), (110, 47703), (118, 47640), (124, 47586),

Gene: Deby_76 Start: 50830, Stop: 51291, Start Num: 58

Candidate Starts for Deby_76:

(Start: 58 @50830 has 65 MA's), (Start: 70 @50857 has 6 MA's), (73, 50866), (96, 50926), (102, 50989), (110, 51031), (111, 51034), (128, 51172), (143, 51268), (144, 51271),

Gene: DekHockey33_89 Start: 47389, Stop: 46922, Start Num: 65

Candidate Starts for DekHockey33_89:

(Start: 65 @47389 has 14 MA's), (Start: 79 @47377 has 24 MA's), (89, 47338), (93, 47323),

Gene: DeluluLabubu_241 Start: 115489, Stop: 115944, Start Num: 79

Candidate Starts for DeluluLabubu_241:

(59, 115435), (Start: 78 @115486 has 2 MA's), (Start: 79 @115489 has 24 MA's), (88, 115525), (89, 115528), (102, 115627), (103, 115639), (112, 115678), (118, 115729), (128, 115810), (145, 115930), (146, 115933),

Gene: Dhanush_81 Start: 47902, Stop: 47432, Start Num: 64

Candidate Starts for Dhanush_81:

(Start: 56 @47920 has 5 MA's), (Start: 64 @47902 has 169 MA's), (Start: 68 @47893 has 1 MA's), (Start: 70 @47890 has 6 MA's), (Start: 79 @47872 has 24 MA's), (89, 47833), (110, 47698), (124, 47581),

Gene: DirtyDunning_80 Start: 47911, Stop: 47441, Start Num: 64

Candidate Starts for DirtyDunning_80:

(Start: 56 @47929 has 5 MA's), (Start: 64 @47911 has 169 MA's), (Start: 68 @47902 has 1 MA's), (Start: 70 @47899 has 6 MA's), (Start: 79 @47881 has 24 MA's), (89, 47842), (104, 47734), (110, 47707), (118, 47644), (124, 47590),

Gene: DismalFunk_82 Start: 53325, Stop: 53894, Start Num: 66

Candidate Starts for DismalFunk_82:

(Start: 66 @53325 has 12 MA's), (Start: 70 @53334 has 6 MA's), (85, 53364), (98, 53436), (104, 53481), (110, 53508), (111, 53511), (118, 53571), (157, 53835), (159, 53850),

Gene: DismalStressor_82 Start: 53325, Stop: 53894, Start Num: 66

Candidate Starts for DismalStressor_82:

(Start: 66 @53325 has 12 MA's), (Start: 70 @53334 has 6 MA's), (85, 53364), (98, 53436), (104, 53481), (110, 53508), (111, 53511), (118, 53571), (157, 53835), (159, 53850),

Gene: DontArgue_75 Start: 46372, Stop: 45908, Start Num: 64

Candidate Starts for DontArgue_75:

(Start: 64 @46372 has 169 MA's), (Start: 79 @46348 has 24 MA's), (104, 46201), (110, 46174), (120, 46099), (124, 46057),

Gene: Dorin_235 Start: 120741, Stop: 121214, Start Num: 76

Candidate Starts for Dorin_235:

(74, 120735), (Start: 76 @120741 has 2 MA's), (92, 120801), (104, 120897), (118, 120987), (122, 121011), (136, 121119), (141, 121158), (147, 121194), (148, 121206),

Gene: Dorothea_84 Start: 46650, Stop: 46198, Start Num: 67

Candidate Starts for Dorothea_84:

(Start: 67 @46650 has 39 MA's), (Start: 79 @46623 has 24 MA's), (96, 46557), (104, 46479), (128, 46311),

Gene: Doughnut_82 Start: 52967, Stop: 53548, Start Num: 66

Candidate Starts for Doughnut_82:

(Start: 66 @52967 has 12 MA's), (Start: 70 @52979 has 6 MA's), (104, 53126), (110, 53153), (111, 53156), (118, 53216), (151, 53432), (157, 53489), (159, 53504),

Gene: DrHayes_76 Start: 50854, Stop: 51315, Start Num: 58

Candidate Starts for DrHayes_76:

(Start: 58 @50854 has 65 MA's), (Start: 70 @50881 has 6 MA's), (73, 50890), (87, 50917), (96, 50950), (102, 51013), (111, 51058), (128, 51196), (143, 51292), (144, 51295),

Gene: Drake94_77 Start: 46666, Stop: 46199, Start Num: 64

Candidate Starts for Drake94_77:

(Start: 64 @46666 has 169 MA's), (Start: 68 @46657 has 1 MA's), (Start: 79 @46642 has 24 MA's), (96, 46573), (118, 46405),

Gene: DroogsArmy_77 Start: 49905, Stop: 49435, Start Num: 63

Candidate Starts for DroogsArmy_77:

(25, 50100), (29, 50079), (Start: 56 @49920 has 5 MA's), (Start: 63 @49905 has 8 MA's), (Start: 68 @49893 has 1 MA's), (Start: 79 @49872 has 24 MA's), (104, 49725), (110, 49698), (119, 49632), (122, 49614),

Gene: Druantia_79 Start: 47726, Stop: 47259, Start Num: 64

Candidate Starts for Druantia_79:

(Start: 56 @47744 has 5 MA's), (Start: 64 @47726 has 169 MA's), (Start: 68 @47717 has 1 MA's), (Start: 70 @47714 has 6 MA's), (Start: 79 @47696 has 24 MA's), (89, 47657), (110, 47522), (118, 47459), (124, 47405),

Gene: Durfee_76 Start: 50658, Stop: 51119, Start Num: 58

Candidate Starts for Durfee_76:

(Start: 58 @50658 has 65 MA's), (Start: 70 @50685 has 6 MA's), (73, 50694), (96, 50754), (102, 50817), (110, 50859), (111, 50862), (118, 50922), (128, 51000), (143, 51096), (144, 51099),

Gene: DustyMartin_82 Start: 47658, Stop: 47191, Start Num: 64

Candidate Starts for DustyMartin_82:

(Start: 64 @47658 has 169 MA's), (Start: 68 @47649 has 1 MA's), (Start: 79 @47631 has 24 MA's), (104, 47484), (110, 47457), (120, 47382), (124, 47340),

Gene: Eagle_80 Start: 47961, Stop: 47491, Start Num: 64

Candidate Starts for Eagle_80:

(Start: 56 @47916 has 5 MA's), (Start: 64 @47898 has 169 MA's), (Start: 68 @47889 has 1 MA's), (Start: 70 @47886 has 6 MA's), (Start: 79 @47868 has 24 MA's), (89, 47829), (104, 47721), (110, 47694), (118, 47631), (124, 47577),

Gene: Hammer_86 Start: 45843, Stop: 45409, Start Num: 79

Candidate Starts for Hammer_86:

(Start: 67 @45870 has 39 MA's), (Start: 79 @45843 has 24 MA's), (94, 45783), (104, 45690), (122, 45576), (128, 45522),

Gene: Happiness_80 Start: 47922, Stop: 47452, Start Num: 64

Candidate Starts for Happiness_80:

(Start: 56 @47940 has 5 MA's), (Start: 64 @47922 has 169 MA's), (Start: 68 @47913 has 1 MA's), (Start: 70 @47910 has 6 MA's), (Start: 79 @47892 has 24 MA's), (89, 47853), (110, 47718), (124, 47601),

Gene: HedwigODU_76 Start: 50506, Stop: 50967, Start Num: 58

Candidate Starts for HedwigODU_76:

(Start: 58 @50506 has 65 MA's), (Start: 70 @50533 has 6 MA's), (73, 50542), (96, 50602), (102, 50665), (110, 50707), (111, 50710), (118, 50770), (128, 50848), (143, 50944), (144, 50947),

Gene: Helmet_88 Start: 46485, Stop: 46024, Start Num: 67

Candidate Starts for Helmet_88:

(Start: 67 @46485 has 39 MA's), (Start: 79 @46458 has 24 MA's), (94, 46398), (104, 46305), (122, 46191),

Gene: Herbertwm_78 Start: 46898, Stop: 46428, Start Num: 63

Candidate Starts for Herbertwm_78:

(Start: 63 @46898 has 8 MA's), (Start: 79 @46868 has 24 MA's), (83, 46856), (88, 46832), (100, 46745), (104, 46721), (110, 46694), (111, 46691), (118, 46631),

Gene: Hexamo_85 Start: 46038, Stop: 45577, Start Num: 67

Candidate Starts for Hexamo_85:

(Start: 67 @46038 has 39 MA's), (Start: 79 @46011 has 24 MA's), (94, 45951), (104, 45858), (122, 45744), (128, 45690),

Gene: Hexbug_40 Start: 28044, Stop: 27442, Start Num: 20

Candidate Starts for Hexbug_40:

(6, 28101), (8, 28095), (13, 28074), (Start: 20 @28044 has 14 MA's), (Start: 70 @27903 has 6 MA's), (104, 27756), (106, 27750), (111, 27726), (118, 27669), (140, 27486),

Gene: Holli_80 Start: 47689, Stop: 47219, Start Num: 64

Candidate Starts for Holli_80:

(Start: 56 @47707 has 5 MA's), (Start: 64 @47689 has 169 MA's), (Start: 68 @47680 has 1 MA's), (Start: 70 @47677 has 6 MA's), (Start: 79 @47659 has 24 MA's), (89, 47620), (104, 47512), (110, 47485), (118, 47422), (124, 47368),

Gene: Homura_75 Start: 50461, Stop: 50922, Start Num: 58

Candidate Starts for Homura_75:

(Start: 58 @50461 has 65 MA's), (Start: 70 @50488 has 6 MA's), (73, 50497), (96, 50557), (102, 50620), (110, 50662), (111, 50665), (118, 50725), (128, 50803), (143, 50899), (144, 50902),

Gene: Hoot_79 Start: 43863, Stop: 43402, Start Num: 67

Candidate Starts for Hoot_79:

(Start: 67 @43863 has 39 MA's), (Start: 79 @43836 has 24 MA's), (94, 43776), (104, 43683), (128, 43515),

Gene: Houdini22_80 Start: 47900, Stop: 47430, Start Num: 64

Candidate Starts for Houdini22_80:

(Start: 56 @47918 has 5 MA's), (Start: 64 @47900 has 169 MA's), (Start: 68 @47891 has 1 MA's), (Start: 70 @47888 has 6 MA's), (Start: 79 @47870 has 24 MA's), (89, 47831), (110, 47696), (124, 47579),

Gene: Hurricane_79 Start: 51359, Stop: 51922, Start Num: 35

Candidate Starts for Hurricane_79:

(Start: 35 @51359 has 16 MA's), (41, 51416), (47, 51440), (Start: 70 @51491 has 6 MA's), (72, 51497), (87, 51527), (96, 51560), (98, 51593), (104, 51638), (116, 51701), (118, 51728), (136, 51860),

Gene: Huxley_73 Start: 45792, Stop: 45322, Start Num: 64

Candidate Starts for Huxley_73:

(Start: 56 @45810 has 5 MA's), (Start: 64 @45792 has 169 MA's), (Start: 68 @45783 has 1 MA's), (Start: 70 @45780 has 6 MA's), (Start: 79 @45762 has 24 MA's), (89, 45723), (110, 45588), (124, 45471),

Gene: Hyperbowlee_75 Start: 50658, Stop: 51119, Start Num: 58

Candidate Starts for Hyperbowlee_75:

(Start: 58 @50658 has 65 MA's), (Start: 70 @50685 has 6 MA's), (73, 50694), (96, 50754), (102, 50817), (110, 50859), (111, 50862), (118, 50922), (128, 51000), (143, 51096), (144, 51099),

Gene: ICleared_80 Start: 47967, Stop: 47497, Start Num: 64

Candidate Starts for ICleared_80:

(16, 48198), (Start: 56 @47985 has 5 MA's), (Start: 64 @47967 has 169 MA's), (Start: 68 @47958 has 1 MA's), (Start: 70 @47955 has 6 MA's), (Start: 79 @47937 has 24 MA's), (89, 47898), (110, 47763), (124, 47646),

Gene: Iceman_79 Start: 48189, Stop: 47719, Start Num: 64

Candidate Starts for Iceman_79:

(Start: 56 @48207 has 5 MA's), (Start: 64 @48189 has 169 MA's), (Start: 68 @48180 has 1 MA's), (Start: 70 @48177 has 6 MA's), (Start: 79 @48159 has 24 MA's), (89, 48120), (110, 47985), (124, 47868),

Gene: Indra_89 Start: 46486, Stop: 46025, Start Num: 67

Candidate Starts for Indra_89:

(Start: 67 @46486 has 39 MA's), (Start: 79 @46459 has 24 MA's), (94, 46399), (104, 46306), (122, 46192),

Gene: Inky_76 Start: 50461, Stop: 50922, Start Num: 58

Candidate Starts for Inky_76:

(Start: 58 @50461 has 65 MA's), (Start: 70 @50488 has 6 MA's), (73, 50497), (96, 50557), (102, 50620), (110, 50662), (111, 50665), (118, 50725), (128, 50803), (143, 50899), (144, 50902),

Gene: Iracema64_81 Start: 48163, Stop: 47693, Start Num: 64

Candidate Starts for Iracema64_81:

(Start: 56 @48181 has 5 MA's), (Start: 64 @48163 has 169 MA's), (Start: 68 @48154 has 1 MA's), (Start: 70 @48151 has 6 MA's), (Start: 79 @48133 has 24 MA's), (89, 48094), (110, 47959), (124, 47842),

(32, 46847), (Start: 56 @46706 has 5 MA's), (Start: 71 @46685 has 1 MA's), (Start: 79 @46673 has 24 MA's), (82, 46664), (88, 46637), (96, 46604), (104, 46526), (143, 46256),

Gene: Kingmustik0402_81 Start: 47888, Stop: 47418, Start Num: 64

Candidate Starts for Kingmustik0402_81:

(Start: 56 @47906 has 5 MA's), (Start: 64 @47888 has 169 MA's), (Start: 68 @47879 has 1 MA's), (Start: 70 @47876 has 6 MA's), (Start: 79 @47858 has 24 MA's), (89, 47819), (110, 47684), (124, 47567),

Gene: Kipper29_84 Start: 46022, Stop: 45570, Start Num: 67

Candidate Starts for Kipper29_84:

(Start: 67 @46022 has 39 MA's), (Start: 79 @45995 has 24 MA's), (96, 45929), (104, 45851), (128, 45683),

Gene: KittenMittens_76 Start: 46673, Stop: 46209, Start Num: 64

Candidate Starts for KittenMittens_76:

(Start: 64 @46673 has 169 MA's), (Start: 68 @46664 has 1 MA's), (Start: 79 @46649 has 24 MA's), (124, 46358),

Gene: Koan_78 Start: 47899, Stop: 47429, Start Num: 64

Candidate Starts for Koan_78:

(Start: 56 @47917 has 5 MA's), (Start: 64 @47899 has 169 MA's), (Start: 68 @47890 has 1 MA's), (Start: 70 @47887 has 6 MA's), (Start: 79 @47869 has 24 MA's), (89, 47830), (110, 47695), (124, 47578),

Gene: Koko_87 Start: 46875, Stop: 46414, Start Num: 67

Candidate Starts for Koko_87:

(Start: 67 @46875 has 39 MA's), (Start: 79 @46848 has 24 MA's), (94, 46788), (104, 46695), (122, 46581),

Gene: Koreni_80 Start: 47580, Stop: 47110, Start Num: 64

Candidate Starts for Koreni_80:

(Start: 56 @47598 has 5 MA's), (Start: 64 @47580 has 169 MA's), (Start: 68 @47571 has 1 MA's), (Start: 70 @47568 has 6 MA's), (Start: 79 @47550 has 24 MA's), (89, 47511), (110, 47376), (124, 47259),

Gene: Kratak_80 Start: 47933, Stop: 47463, Start Num: 64

Candidate Starts for Kratak_80:

(Start: 56 @47951 has 5 MA's), (Start: 64 @47933 has 169 MA's), (Start: 68 @47924 has 1 MA's), (Start: 70 @47921 has 6 MA's), (Start: 79 @47903 has 24 MA's), (89, 47864), (110, 47729), (124, 47612),

Gene: Kraw_81 Start: 51233, Stop: 51790, Start Num: 70

Candidate Starts for Kraw_81:

(24, 51011), (26, 51026), (31, 51062), (36, 51083), (38, 51110), (43, 51140), (Start: 56 @51200 has 5 MA's), (Start: 61 @51209 has 18 MA's), (Start: 64 @51218 has 169 MA's), (Start: 70 @51233 has 6 MA's), (96, 51302), (103, 51377), (104, 51380), (110, 51407), (118, 51470), (128, 51548), (154, 51713), (156, 51719), (160, 51758),

Gene: Kremtemulon_78 Start: 47779, Stop: 47309, Start Num: 64

Candidate Starts for Kremtemulon_78:

(Start: 56 @47797 has 5 MA's), (Start: 64 @47779 has 169 MA's), (Start: 68 @47770 has 1 MA's), (Start: 70 @47767 has 6 MA's), (Start: 79 @47749 has 24 MA's), (89, 47710), (110, 47575), (124,

47458),

Gene: Kristoff_78 Start: 47941, Stop: 47477, Start Num: 64

Candidate Starts for Kristoff_78:

(Start: 64 @47941 has 169 MA's), (Start: 68 @47932 has 1 MA's), (Start: 79 @47917 has 24 MA's), (118, 47680),

Gene: Krueger_83 Start: 51452, Stop: 52018, Start Num: 34

Candidate Starts for Krueger_83:

(Start: 34 @51452 has 12 MA's), (37, 51482), (Start: 61 @51563 has 18 MA's), (Start: 70 @51584 has 6 MA's), (98, 51686), (104, 51731), (118, 51821), (128, 51899), (136, 51953), (144, 51998),

Gene: Kyee_81 Start: 47894, Stop: 47424, Start Num: 64

Candidate Starts for Kyee_81:

(Start: 56 @47912 has 5 MA's), (Start: 64 @47894 has 169 MA's), (Start: 68 @47885 has 1 MA's), (Start: 70 @47882 has 6 MA's), (Start: 79 @47864 has 24 MA's), (89, 47825), (110, 47690), (124, 47573),

Gene: LHTSCC_83 Start: 48339, Stop: 47869, Start Num: 64

Candidate Starts for LHTSCC_83:

(Start: 56 @48357 has 5 MA's), (Start: 64 @48339 has 169 MA's), (Start: 68 @48330 has 1 MA's), (Start: 70 @48327 has 6 MA's), (Start: 79 @48309 has 24 MA's), (89, 48270), (110, 48135), (124, 48018),

Gene: Landor_82 Start: 48758, Stop: 48288, Start Num: 64

Candidate Starts for Landor_82:

(Start: 64 @48758 has 169 MA's), (Start: 68 @48749 has 1 MA's), (Start: 79 @48734 has 24 MA's), (118, 48494),

Gene: LappelDuVide_81 Start: 47899, Stop: 47429, Start Num: 64

Candidate Starts for LappelDuVide_81:

(Start: 56 @47917 has 5 MA's), (Start: 64 @47899 has 169 MA's), (Start: 68 @47890 has 1 MA's), (Start: 70 @47887 has 6 MA's), (Start: 79 @47869 has 24 MA's), (89, 47830), (104, 47722), (110, 47695), (118, 47632), (124, 47578),

Gene: LastHope_83 Start: 51070, Stop: 51531, Start Num: 58

Candidate Starts for LastHope_83:

(Start: 58 @51070 has 65 MA's), (62, 51076), (Start: 70 @51097 has 6 MA's), (73, 51106), (87, 51133), (96, 51166), (103, 51241), (110, 51271), (111, 51274), (118, 51334), (128, 51412), (144, 51511),

Gene: LastResort_85 Start: 47049, Stop: 46582, Start Num: 65

Candidate Starts for LastResort_85:

(Start: 65 @47049 has 14 MA's), (Start: 79 @47037 has 24 MA's), (89, 46998), (93, 46983),

Gene: Lauer_32 Start: 28305, Stop: 27505, Start Num: 4

Candidate Starts for Lauer_32:

(Start: 4 @28305 has 1 MA's), (9, 28275), (11, 28269), (Start: 18 @28221 has 8 MA's), (22, 28215), (Start: 79 @27957 has 24 MA's), (87, 27933), (88, 27921), (99, 27840), (106, 27804), (115, 27750), (120, 27711), (122, 27699), (124, 27669), (139, 27558),

Gene: LeMond_78 Start: 50717, Stop: 51304, Start Num: 35

Candidate Starts for LeMond_78:

47578),

Gene: NotAPhaseMom_80 Start: 47900, Stop: 47430, Start Num: 64

Candidate Starts for NotAPhaseMom_80:

(Start: 56 @47918 has 5 MA's), (Start: 64 @47900 has 169 MA's), (Start: 68 @47891 has 1 MA's), (Start: 70 @47888 has 6 MA's), (Start: 79 @47870 has 24 MA's), (89, 47831), (110, 47696), (124, 47579),

Gene: Nyxis_80 Start: 47781, Stop: 47308, Start Num: 64

Candidate Starts for Nyxis_80:

(Start: 56 @47799 has 5 MA's), (Start: 64 @47781 has 169 MA's), (80, 47748), (89, 47709), (93, 47694), (98, 47646), (110, 47574), (124, 47457),

Gene: OKCentral2016_79 Start: 46747, Stop: 46280, Start Num: 63

Candidate Starts for OKCentral2016_79:

(Start: 56 @46762 has 5 MA's), (Start: 63 @46747 has 8 MA's), (Start: 70 @46732 has 6 MA's), (Start: 79 @46720 has 24 MA's), (96, 46651), (104, 46573), (110, 46546), (124, 46429),

Gene: OKaNui_80 Start: 47950, Stop: 47480, Start Num: 64

Candidate Starts for OKaNui_80:

(Start: 56 @47968 has 5 MA's), (Start: 64 @47950 has 169 MA's), (Start: 68 @47941 has 1 MA's), (Start: 70 @47938 has 6 MA's), (Start: 79 @47920 has 24 MA's), (89, 47881), (110, 47746), (124, 47629),

Gene: Obama12_82 Start: 48323, Stop: 47853, Start Num: 64

Candidate Starts for Obama12_82:

(Start: 56 @48341 has 5 MA's), (Start: 64 @48323 has 169 MA's), (Start: 68 @48314 has 1 MA's), (Start: 70 @48311 has 6 MA's), (Start: 79 @48293 has 24 MA's), (89, 48254), (110, 48119), (124, 48002),

Gene: Ohfah_82 Start: 47939, Stop: 47469, Start Num: 64

Candidate Starts for Ohfah_82:

(Start: 56 @47957 has 5 MA's), (Start: 64 @47939 has 169 MA's), (Start: 68 @47930 has 1 MA's), (Start: 70 @47927 has 6 MA's), (Start: 79 @47909 has 24 MA's), (89, 47870), (110, 47735), (124, 47618),

Gene: OmniCritical_81 Start: 51378, Stop: 51953, Start Num: 64

Candidate Starts for OmniCritical_81:

(24, 51180), (31, 51231), (38, 51285), (43, 51315), (Start: 56 @51360 has 5 MA's), (Start: 61 @51369 has 18 MA's), (Start: 64 @51378 has 169 MA's), (Start: 70 @51393 has 6 MA's), (96, 51462), (104, 51540), (110, 51567), (114, 51588), (118, 51630), (128, 51708), (156, 51882), (160, 51921),

Gene: Orla_40 Start: 28015, Stop: 27413, Start Num: 20

Candidate Starts for Orla_40:

(6, 28072), (8, 28066), (13, 28045), (Start: 20 @28015 has 14 MA's), (Start: 70 @27874 has 6 MA's), (104, 27727), (106, 27721), (111, 27697), (118, 27640),

Gene: Oscar_78 Start: 50636, Stop: 51223, Start Num: 35

Candidate Starts for Oscar_78:

(Start: 35 @50636 has 16 MA's), (42, 50693), (Start: 56 @50756 has 5 MA's), (Start: 70 @50789 has 6 MA's), (72, 50795), (96, 50858), (98, 50891), (104, 50936), (110, 50963), (118, 51026), (128, 51104), (144, 51203),

47572),

Gene: PetiteSangsue_77 Start: 47521, Stop: 47054, Start Num: 64

Candidate Starts for PetiteSangsue_77:

(Start: 56 @47539 has 5 MA's), (Start: 64 @47521 has 169 MA's), (Start: 68 @47512 has 1 MA's), (Start: 70 @47509 has 6 MA's), (Start: 79 @47491 has 24 MA's), (89, 47452), (110, 47317), (118, 47254), (124, 47200),

Gene: Phabba_240 Start: 133855, Stop: 134328, Start Num: 64

Candidate Starts for Phabba_240:

(Start: 64 @133855 has 169 MA's), (Start: 70 @133870 has 6 MA's), (104, 134017), (118, 134104), (128, 134206), (144, 134308),

Gene: Phacado_81 Start: 47895, Stop: 47425, Start Num: 64

Candidate Starts for Phacado_81:

(Start: 56 @47913 has 5 MA's), (Start: 64 @47895 has 169 MA's), (Start: 68 @47886 has 1 MA's), (Start: 70 @47883 has 6 MA's), (Start: 79 @47865 has 24 MA's), (89, 47826), (110, 47691), (124, 47574),

Gene: Phaded_78 Start: 48717, Stop: 48247, Start Num: 64

Candidate Starts for Phaded_78:

(Start: 64 @48717 has 169 MA's), (Start: 68 @48708 has 1 MA's), (Start: 79 @48693 has 24 MA's), (88, 48657), (118, 48453),

Gene: Pharb_77 Start: 50633, Stop: 51190, Start Num: 64

Candidate Starts for Pharb_77:

(Start: 64 @50633 has 169 MA's), (Start: 70 @50648 has 6 MA's), (96, 50717), (97, 50720), (104, 50795), (118, 50885), (136, 51017), (153, 51113), (155, 51125), (158, 51140), (162, 51182),

Gene: Phelipe_81 Start: 47860, Stop: 47345, Start Num: 64

Candidate Starts for Phelipe_81:

(Start: 56 @47878 has 5 MA's), (Start: 64 @47860 has 169 MA's), (Start: 68 @47851 has 1 MA's), (Start: 70 @47848 has 6 MA's), (Start: 79 @47830 has 24 MA's), (89, 47791), (110, 47656), (124, 47539),

Gene: PhelpsODU_81 Start: 51079, Stop: 51651, Start Num: 61

Candidate Starts for PhelpsODU_81:

(Start: 61 @51079 has 18 MA's), (Start: 70 @51100 has 6 MA's), (96, 51169), (98, 51202), (100, 51223), (104, 51247), (111, 51277), (118, 51337), (128, 51415), (136, 51469), (140, 51493), (161, 51631),

Gene: Phighter1804_81 Start: 47960, Stop: 47490, Start Num: 64

Candidate Starts for Phighter1804_81:

(Start: 56 @47978 has 5 MA's), (Start: 64 @47960 has 169 MA's), (Start: 68 @47951 has 1 MA's), (Start: 70 @47948 has 6 MA's), (Start: 79 @47930 has 24 MA's), (89, 47891), (110, 47756), (124, 47639),

Gene: Phontbonne_81 Start: 47797, Stop: 47324, Start Num: 64

Candidate Starts for Phontbonne_81:

(Start: 56 @47815 has 5 MA's), (Start: 64 @47797 has 169 MA's), (80, 47764), (89, 47725), (93, 47710), (98, 47662), (110, 47590), (124, 47473),

Gene: Phrank_82 Start: 50939, Stop: 51511, Start Num: 61

Gene: Stasia_78 Start: 47849, Stop: 47385, Start Num: 64

Candidate Starts for Stasia_78:

(Start: 64 @47849 has 169 MA's), (Start: 68 @47840 has 1 MA's), (Start: 79 @47825 has 24 MA's), (96, 47756),

Gene: SteMason_81 Start: 47896, Stop: 47426, Start Num: 64

Candidate Starts for SteMason_81:

(Start: 56 @47914 has 5 MA's), (Start: 64 @47896 has 169 MA's), (Start: 68 @47887 has 1 MA's), (Start: 70 @47884 has 6 MA's), (Start: 79 @47866 has 24 MA's), (89, 47827), (110, 47692), (124, 47575),

Gene: Stigma_236 Start: 115959, Stop: 116417, Start Num: 79

Candidate Starts for Stigma_236:

(Start: 78 @115956 has 2 MA's), (Start: 79 @115959 has 24 MA's), (89, 115998), (102, 116097), (105, 116115), (112, 116148), (116, 116175), (128, 116283), (145, 116403), (146, 116406),

Gene: Stink_81 Start: 48123, Stop: 47653, Start Num: 64

Candidate Starts for Stink_81:

(Start: 56 @48141 has 5 MA's), (Start: 64 @48123 has 169 MA's), (Start: 70 @48108 has 6 MA's), (75, 48096), (Start: 79 @48090 has 24 MA's), (93, 48036), (96, 48021), (110, 47916), (124, 47799),

Gene: Strobilo_83 Start: 53322, Stop: 53891, Start Num: 66

Candidate Starts for Strobilo_83:

(Start: 66 @53322 has 12 MA's), (Start: 70 @53331 has 6 MA's), (85, 53361), (98, 53433), (104, 53478), (110, 53505), (111, 53508), (118, 53568), (157, 53832), (159, 53847),

Gene: Sultana_81 Start: 47896, Stop: 47426, Start Num: 64

Candidate Starts for Sultana_81:

(Start: 56 @47914 has 5 MA's), (Start: 64 @47896 has 169 MA's), (Start: 68 @47887 has 1 MA's), (Start: 70 @47884 has 6 MA's), (Start: 79 @47866 has 24 MA's), (89, 47827), (110, 47692), (124, 47575),

Gene: SummitAcademy_34 Start: 26942, Stop: 26226, Start Num: 18

Candidate Starts for SummitAcademy_34:

(1, 27092), (Start: 3 @27044 has 1 MA's), (9, 26996), (11, 26990), (Start: 18 @26942 has 8 MA's), (22, 26936), (Start: 79 @26678 has 24 MA's), (87, 26654), (88, 26642), (99, 26561), (106, 26525), (115, 26471), (120, 26432), (122, 26420), (124, 26390), (139, 26279),

Gene: Sunflower1121_82 Start: 51137, Stop: 51703, Start Num: 34

Candidate Starts for Sunflower1121_82:

(Start: 34 @51137 has 12 MA's), (37, 51167), (55, 51236), (Start: 61 @51248 has 18 MA's), (Start: 70 @51269 has 6 MA's), (87, 51305), (98, 51371), (104, 51416), (118, 51506), (128, 51584), (136, 51638), (144, 51683),

Gene: Sunhee_85 Start: 46182, Stop: 45712, Start Num: 70

Candidate Starts for Sunhee_85:

(Start: 70 @46182 has 6 MA's), (Start: 79 @46170 has 24 MA's), (104, 46017), (110, 45990), (114, 45969), (129, 45840), (143, 45744),

Gene: SuperAwesome_84 Start: 46693, Stop: 46232, Start Num: 67

Candidate Starts for SuperAwesome_84:

47689), (118, 47626), (124, 47572),

Gene: ToneTone_83 Start: 46045, Stop: 45584, Start Num: 67

Candidate Starts for ToneTone_83:

(Start: 67 @46045 has 39 MA's), (Start: 79 @46018 has 24 MA's), (94, 45958), (104, 45865), (122, 45751),

Gene: Topanga_69 Start: 44300, Stop: 43836, Start Num: 64

Candidate Starts for Topanga_69:

(Start: 64 @44300 has 169 MA's), (Start: 79 @44276 has 24 MA's), (87, 44252),

Gene: Topper_76 Start: 50461, Stop: 50922, Start Num: 58

Candidate Starts for Topper_76:

(Start: 58 @50461 has 65 MA's), (Start: 70 @50488 has 6 MA's), (73, 50497), (96, 50557), (102, 50620), (110, 50662), (111, 50665), (118, 50725), (128, 50803), (143, 50899), (144, 50902),

Gene: Toro_79 Start: 50438, Stop: 49965, Start Num: 63

Candidate Starts for Toro_79:

(57, 50450), (Start: 63 @50438 has 8 MA's), (Start: 79 @50405 has 24 MA's), (88, 50369), (96, 50336), (104, 50258), (110, 50231), (118, 50168), (122, 50144), (143, 49988), (144, 49985),

Gene: TreyKay_79 Start: 50926, Stop: 51387, Start Num: 58

Candidate Starts for TreyKay_79:

(Start: 58 @50926 has 65 MA's), (Start: 70 @50953 has 6 MA's), (73, 50962), (96, 51022), (102, 51085), (111, 51130), (128, 51268), (143, 51364), (144, 51367),

Gene: TribbleTrouble_78 Start: 51156, Stop: 51722, Start Num: 35

Candidate Starts for TribbleTrouble_78:

(27, 51108), (28, 51111), (Start: 35 @51156 has 16 MA's), (Start: 70 @51291 has 6 MA's), (72, 51297), (96, 51360), (98, 51393), (100, 51414), (103, 51435), (104, 51438), (118, 51528), (129, 51612), (136, 51660),

Gene: Tristan_80 Start: 48549, Stop: 48079, Start Num: 64

Candidate Starts for Tristan_80:

(Start: 64 @48549 has 169 MA's), (Start: 68 @48540 has 1 MA's), (Start: 79 @48525 has 24 MA's), (88, 48489), (110, 48345), (118, 48285),

Gene: TroyPia_82 Start: 47934, Stop: 47464, Start Num: 64

Candidate Starts for TroyPia_82:

(Start: 56 @47952 has 5 MA's), (Start: 64 @47934 has 169 MA's), (Start: 68 @47925 has 1 MA's), (Start: 70 @47922 has 6 MA's), (Start: 79 @47904 has 24 MA's), (89, 47865), (110, 47730), (124, 47613),

Gene: TruffulaTree_78 Start: 50874, Stop: 51335, Start Num: 58

Candidate Starts for TruffulaTree_78:

(Start: 58 @50874 has 65 MA's), (Start: 70 @50901 has 6 MA's), (73, 50910), (96, 50970), (102, 51033), (110, 51075), (111, 51078), (128, 51216), (143, 51312), (144, 51315),

Gene: Tucker_86 Start: 46248, Stop: 45787, Start Num: 67

Candidate Starts for Tucker_86:

(Start: 67 @46248 has 39 MA's), (Start: 79 @46221 has 24 MA's), (94, 46161), (104, 46068), (122, 45954),

(Start: 67 @46013 has 39 MA's), (Start: 79 @45986 has 24 MA's), (94, 45926), (104, 45833), (128, 45665),

Gene: Waits_87 Start: 47034, Stop: 46567, Start Num: 65

Candidate Starts for Waits_87:

(Start: 65 @47034 has 14 MA's), (Start: 79 @47022 has 24 MA's), (89, 46983), (93, 46968),

Gene: Wakanda_212 Start: 105499, Stop: 105951, Start Num: 79

Candidate Starts for Wakanda_212:

(Start: 79 @105499 has 24 MA's), (87, 105523), (89, 105538), (90, 105541), (102, 105631), (105, 105649), (112, 105682), (139, 105883),

Gene: WalterMcMickey_79 Start: 47500, Stop: 47036, Start Num: 64

Candidate Starts for WalterMcMickey_79:

(Start: 64 @47500 has 169 MA's), (Start: 70 @47488 has 6 MA's), (Start: 79 @47476 has 24 MA's), (104, 47329), (110, 47302), (124, 47185),

Gene: Wander_81 Start: 47893, Stop: 47423, Start Num: 64

Candidate Starts for Wander_81:

(Start: 56 @47911 has 5 MA's), (Start: 64 @47893 has 169 MA's), (Start: 68 @47884 has 1 MA's), (Start: 70 @47881 has 6 MA's), (Start: 79 @47863 has 24 MA's), (89, 47824), (110, 47689), (124, 47572),

Gene: Westy_239 Start: 116391, Stop: 116849, Start Num: 79

Candidate Starts for Westy_239:

(Start: 78 @116388 has 2 MA's), (Start: 79 @116391 has 24 MA's), (89, 116430), (102, 116529), (105, 116547), (112, 116580), (116, 116607), (126, 116700), (128, 116715), (145, 116835), (146, 116838),

Gene: Wiks_85 Start: 46116, Stop: 45655, Start Num: 67

Candidate Starts for Wiks_85:

(Start: 67 @46116 has 39 MA's), (Start: 79 @46089 has 24 MA's), (94, 46029), (104, 45936), (122, 45822),

Gene: Wilbur_81 Start: 47896, Stop: 47426, Start Num: 64

Candidate Starts for Wilbur_81:

(Start: 56 @47914 has 5 MA's), (Start: 64 @47896 has 169 MA's), (Start: 68 @47887 has 1 MA's), (Start: 70 @47884 has 6 MA's), (Start: 79 @47866 has 24 MA's), (89, 47827), (110, 47692), (124, 47575),

Gene: Wile_76 Start: 47547, Stop: 47080, Start Num: 64

Candidate Starts for Wile_76:

(Start: 56 @47565 has 5 MA's), (Start: 64 @47547 has 169 MA's), (Start: 68 @47538 has 1 MA's), (Start: 70 @47535 has 6 MA's), (Start: 79 @47517 has 24 MA's), (89, 47478), (110, 47343), (118, 47280), (124, 47226),

Gene: Wintermute_81 Start: 51441, Stop: 52025, Start Num: 61

Candidate Starts for Wintermute_81:

(24, 51252), (31, 51303), (38, 51357), (43, 51387), (Start: 56 @51432 has 5 MA's), (Start: 61 @51441 has 18 MA's), (Start: 64 @51450 has 169 MA's), (Start: 70 @51465 has 6 MA's), (96, 51534), (102, 51597), (104, 51612), (110, 51639), (118, 51702), (156, 51954), (160, 51993),

Gene: Wizard007_77 Start: 47273, Stop: 46806, Start Num: 64

Candidate Starts for Wizard007_77:

(Start: 67 @46116 has 39 MA's), (Start: 79 @46089 has 24 MA's), (94, 46029), (104, 45936), (122, 45822),

Gene: Yucky_37 Start: 27610, Stop: 26924, Start Num: 20

Candidate Starts for Yucky_37:

(Start: 3 @27712 has 1 MA's), (9, 27664), (11, 27658), (Start: 20 @27610 has 14 MA's), (Start: 79 @27376 has 24 MA's), (84, 27361), (88, 27340), (102, 27244), (103, 27232), (106, 27223), (115, 27169), (120, 27130), (122, 27118), (124, 27088),

Gene: Yuna_80 Start: 52283, Stop: 52852, Start Num: 34

Candidate Starts for Yuna_80:

(Start: 34 @52283 has 12 MA's), (37, 52313), (41, 52340), (42, 52343), (Start: 70 @52418 has 6 MA's), (72, 52424), (Start: 79 @52442 has 24 MA's), (96, 52487), (98, 52520), (104, 52565), (110, 52592), (118, 52655), (128, 52733), (136, 52787),

Gene: Yunkel11_82 Start: 51044, Stop: 51505, Start Num: 58

Candidate Starts for Yunkel11_82:

(Start: 58 @51044 has 65 MA's), (Start: 70 @51071 has 6 MA's), (73, 51080), (96, 51140), (98, 51173), (103, 51215), (110, 51245), (111, 51248), (118, 51308), (128, 51386), (143, 51482), (144, 51485),

Gene: Zabiza_72 Start: 46811, Stop: 47272, Start Num: 58

Candidate Starts for Zabiza_72:

(Start: 58 @46811 has 65 MA's), (Start: 70 @46838 has 6 MA's), (73, 46847), (96, 46907), (102, 46970), (110, 47012), (111, 47015), (118, 47075), (128, 47153), (143, 47249), (144, 47252),

Gene: Zaka_86 Start: 46116, Stop: 45655, Start Num: 67

Candidate Starts for Zaka_86:

(Start: 67 @46116 has 39 MA's), (Start: 79 @46089 has 24 MA's), (94, 46029), (104, 45936), (122, 45822),

Gene: Zavala_79 Start: 50952, Stop: 51413, Start Num: 58

Candidate Starts for Zavala_79:

(Start: 58 @50952 has 65 MA's), (Start: 66 @50967 has 12 MA's), (Start: 70 @50979 has 6 MA's), (73, 50988), (96, 51048), (102, 51111), (110, 51153), (111, 51156), (128, 51294), (143, 51390), (144, 51393),

Gene: ZoeJ_81 Start: 52756, Stop: 53337, Start Num: 66

Candidate Starts for ZoeJ_81:

(Start: 66 @52756 has 12 MA's), (Start: 70 @52768 has 6 MA's), (104, 52915), (110, 52942), (111, 52945), (118, 53005), (151, 53221), (152, 53248), (157, 53278), (159, 53293),

Gene: Zulu_87 Start: 46494, Stop: 46033, Start Num: 67

Candidate Starts for Zulu_87:

(Start: 67 @46494 has 39 MA's), (Start: 79 @46467 has 24 MA's), (94, 46407), (104, 46314), (122, 46200),