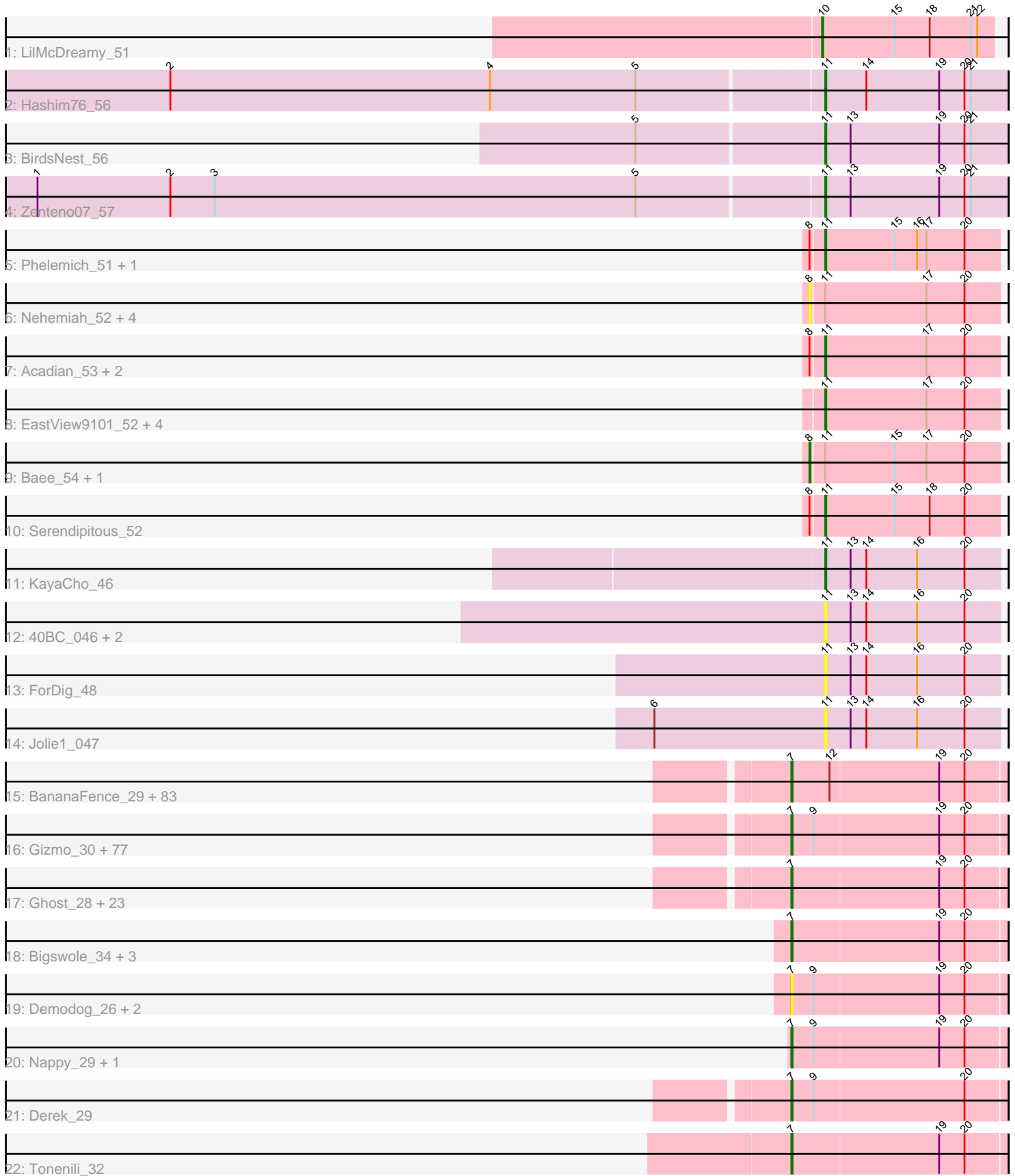


Pham 215815



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 215815 Report

This analysis was run 02/22/25 on database version 588.

Pham number 215815 has 225 members, 39 are drafts.

Phages represented in each track:

- Track 1 : LilMcDreamy_51
- Track 2 : Hashim76_56
- Track 3 : BirdsNest_56
- Track 4 : Zenteno07_57
- Track 5 : Phelemich_51, Reprobate_52
- Track 6 : Nehemiah_52, Nangang_53, DigitDog_53, Mysterious_53, Shenyu_53
- Track 7 : Acadian_53, StinkyVeggy_53, KarasumaRum_53
- Track 8 : EastView9101_52, Suigeneris_54, SirJeffery_52, Donny_54, Rita130_52
- Track 9 : Bae_54, Rich_53
- Track 10 : Serendipitous_52
- Track 11 : KayaCho_46
- Track 12 : 40BC_046, 39HC_046, Hosp_045
- Track 13 : ForDig_48
- Track 14 : Jolie1_047
- Track 15 : BananaFence_29, Kboogie_28, McGee_27, MoMoMixon_29, Asterius_29, Babyland_27, IkeLoa_24, DeejaClivia_24, Grungle_21, Mangeria_31, LordLeafolot_33, Shnickers_28, Jessibeth14_27, LinStu_28, Chomp_28, Domi_23, Blackbrain_26, Astraea_29, ET08_23, Koguma_24, Drazdys_28, Primadonna_23, FrayBell_34, Blackdragon_23, Ading_28, Bonray_28, ChickenPhender_27, Khaleesi_27, Sprinklers_28, Alice_23, Stubby_26, Fongie_28, Halldule_24, BadAgartude_29, Basquiat_27, ScottMcG_28, Trinitium_27, Gabriel_28, Rabinovish_27, Jedediah_28, Phox_27, Shaqnato_24, Cactojaque_25, Sauce_29, StubbySaigey_27, Cane17_21, JulietS_23, HyRo_27, ErnieJ_29, Sebata_28, Jezreel_27, JayJay_31, Colt_21, Delylah_29, RoMag_23, ChaylaJr_27, QBert_26, EmmaElysia_26, Cali_28, Littleton_28, Flabslab_29, StephanieG_28, Chargie21_27, Spec_26, Darko_27, Yassified_25, Fludd_27, Turret_26, Ablatia_26, Pinkcreek_20, LRRHood_25, Shelob_30, Tainan_33, NuevoMundo_31, Issimir_28, Lukilu_21, Essence_27, JPickles_26, Jaygup_28, McWolfish_27, Belieber_24, Shifa_25, Dietrick_23, Lethe_27
- Track 16 : Gizmo_30, Ava3_29, Pio_31, Matsumoto_27, Izajani_29, Rizal_26, Specks_33, SVoro_27, Pleione_30, LifeSavor_29, CharlieB_28, NedWong_29, Pier_30, EmToTheThree_31, InterFolia_35, SrishMeg2525_27, Morizzled23_27, Phusco_28, Bangla1971_27, Bread_29, Lee7_27, Shrimp_28, Tyke_30, I3_30, Yucca_28, Zalkecks_30, Iota_25, Norm_28, ParkTD_27, Daffodil_30, Burrough_28, Zeenon_30, JustHall_27, Loanshark_28, EggyFarm_32, Spud_30, ZygoTaiga_28, Bxz1_28, Breeniome_28, Ronan_23, LolaVinca_31, FudgeTart_29, Delilah_28, PurduePete_27, BigCity_32, Nidhogg_29, Melpomini_27, DrPhinkDaddy_28,

Salacia_30, Willis_28, Teardrop_27, ShiaLabeouf_28, Bipolarisk_27, DirtMonster_27, Blubba_22, Guwapp_28, FoxtrotP1_28, TinyTim_28, YemiJoy2021_29, Mikro_26, Erdmann_29, EasyJones_27, Naval22_30, Grasshills_32, Roots515_28, DTDevon_29, Tortoise16_27, Maby2021_29, MikeLiesIn_28, Rahel_28, BackyardAgain_25, Catera_26, Wally_27, Ewok_28, SmallFry_28, Megamind_28, Naija_28, Napoleon13_27

- Track 17 : Ghost_28, GlutenPhree_26, Adlitam_28, Amataga_28, Phlegm_30, Patter_28, ArcherS7_27, InigoMontoya_29, Janiyra_28, Latch_28, Pivoine_28, Gamgam_28, Kamryn_28, Quasimodo_28, Capablanca_30, CindyLou_28, Jemmno_28, ValleyTerrace_28, Audrick_30, YoungMoneyMata_28, Ngannou_26, SilverDipper_29, Atlantean_28, Momo_27

- Track 18 : Bigswole_34, Caravan_26, BeanWater_24, NoodleTree_27

- Track 19 : Demodog_26, Concombre_27, JigglyPuff_28

- Track 20 : Nappy_29, Dandelion_32

- Track 21 : Derek_29

- Track 22 : Tonenili_32

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

The start number called the most often in the published annotations is 7, it was called in 172 of the 186 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Ablatia_26, Ading_28, Adlitam_28, Alice_23, Amataga_28, ArcherS7_27, Asterius_29, Astraea_29, Atlantean_28, Audrick_30, Ava3_29, Babyland_27, BackyardAgain_25, BadAgartude_29, BananaFence_29, Bangla1971_27, Basquiat_27, BeanWater_24, Belieber_24, BigCity_32, Bigswole_34, Bipolarisk_27, Blackbrain_26, Blackdragon_23, Blubba_22, Bonray_28, Bread_29, Breeniome_28, Burrough_28, Bxz1_28, Cactojaque_25, Cali_28, Cane17_21, Capablanca_30, Caravan_26, Catera_26, Chargie21_27, CharlieB_28, ChaylaJr_27, ChickenPhender_27, Chomp_28, CindyLou_28, Colt_21, Concombre_27, DTDevon_29, Daffodil_30, Dandelion_32, Darko_27, DeejaClivia_24, Delilah_28, Delylah_29, Demodog_26, Derek_29, Dietrick_23, DirtMonster_27, Domi_23, DrPhinkDaddy_28, Drazdys_28, ET08_23, EasyJones_27, EggyFarm_32, EmToTheThree_31, EmmaElysia_26, Erdmann_29, ErnieJ_29, Essence_27, Ewok_28, Flabslab_29, Fludd_27, Fongie_28, FoxtrotP1_28, FrayBell_34, FudgeTart_29, Gabriel_28, Gamgam_28, Ghost_28, Gizmo_30, GlutenPhree_26, Grasshills_32, Grungle_21, Guwapp_28, Halldule_24, HyRo_27, I3_30, IkeLoa_24, InigoMontoya_29, InterFolia_35, Iota_25, Issimir_28, Izajani_29, JPickles_26, Janiyra_28, JayJay_31, Jaygup_28, Jedediah_28, Jemmno_28, Jessibeth14_27, Jezreel_27, JigglyPuff_28, JulietS_23, JustHall_27, Kamryn_28, Kboogie_28, Khaleesi_27, Koguma_24, LRRHood_25, Latch_28, Lee7_27, Lethe_27, LifeSavor_29, LinStu_28, Littleton_28, Loanshark_28, LolaVinca_31, LordLeafolot_33, Lukilu_21, Maby2021_29, Mangeria_31, Matsumoto_27, McGee_27, McWolfish_27, Megamind_28, Melpomini_27, MikeLiesIn_28, Mikro_26, MoMoMixon_29, Momo_27, Morizzled23_27, Naija_28, Napoleon13_27, Nappy_29, Naval22_30, NedWong_29, Ngannou_26, Nidhogg_29, NoodleTree_27, Norm_28, NuevoMundo_31, ParkTD_27, Patter_28, Phlegm_30, Phox_27, Phusco_28, Pier_30, Pinkcreek_20, Pio_31, Pivoine_28, Pleione_30, Primadonna_23, PurduePete_27, QBert_26, Quasimodo_28, Rabinovish_27, Rahel_28, Rizal_26,

RoMag_23, Ronan_23, Roots515_28, SVoro_27, Salacia_30, Sauce_29, ScottMcG_28, Sebata_28, Shaqato_24, Shelob_30, ShiaLabeouf_28, Shifa_25, Shnickers_28, Shrimp_28, SilverDipper_29, SmallFry_28, Spec_26, Specks_33, Sprinklers_28, Spud_30, SrishMeg2525_27, StephanieG_28, StubbySaigey_27, Stubby_26, Tainan_33, Teardrop_27, TinyTim_28, Tonenili_32, Tortoise16_27, Trinitium_27, Turret_26, Tyke_30, ValleyTerrace_28, Wally_27, Willis_28, Yassified_25, YemiJoy2021_29, YoungMoneyMata_28, Yucca_28, Zalkecks_30, Zeenon_30, ZygoTaiga_28,

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

-

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

- 39HC_046, 40BC_046, Acadian_53, Bae_54, BirdsNest_56, DigitDog_53, Donny_54, EastView9101_52, ForDig_48, Hashim76_56, Hosp_045, Jolie1_047, KarasumaRum_53, KayaCho_46, LilMcDreamy_51, Mysterious_53, Nangang_53, Nehemiah_52, Phelemich_51, Reprobate_52, Rich_53, Rita130_52, Serendipitous_52, Shenyu_53, SirJeffery_52, StinkyVeggy_53, Suigeneris_54, Zenteno07_57,

Summary by start number:

Start 7:

- Found in 197 of 225 (87.6%) of genes in pham
- Manual Annotations of this start: 172 of 186
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ablatia_26 (C1), Ading_28 (C1), Adlitam_28 (C1), Alice_23 (C1), Amataga_28 (C1), ArcherS7_27 (C1), Asterius_29 (C1), Astraea_29 (C1), Atlantean_28 (C1), Audrick_30 (C1), Ava3_29 (C1), Babyland_27 (C1), BackyardAgain_25 (C1), BadAgartude_29 (C1), BananaFence_29 (C1), Bangla1971_27 (C1), Basquiat_27 (C1), BeanWater_24 (C1), Belieber_24 (C1), BigCity_32 (C1), Bigswole_34 (C1), Bipolarisk_27 (C1), Blackbrain_26 (C1), Blackdragon_23 (C1), Blubba_22 (C1), Bonray_28 (C1), Bread_29 (C1), Breeniome_28 (C1), Burrough_28 (C1), Bxz1_28 (C1), Cactojaque_25 (C1), Cali_28 (C1), Cane17_21 (C1), Capablanca_30 (C1), Caravan_26 (C1), Catera_26 (C1), Chargie21_27 (C1), CharlieB_28 (C1), ChaylaJr_27 (C1), ChickenPhender_27 (C1), Chomp_28 (C1), CindyLou_28 (C1), Colt_21 (C1), Concombre_27 (C1), DTDevon_29 (C1), Daffodil_30 (C1), Dandelion_32 (C1), Darko_27 (C1), DeejaClivia_24 (C1), Delilah_28 (C1), Delylah_29 (C1), Demodog_26 (C1), Derek_29 (C1), Dietrick_23 (C1), DirtMonster_27 (C1), Domi_23 (C1), DrPhinkDaddy_28 (C1), Drazdys_28 (C1), ET08_23 (C1), EasyJones_27 (C1), EggyFarm_32 (C1), EmToTheThree_31 (C1), EmmaElysia_26 (C1), Erdmann_29 (C1), ErnieJ_29 (C1), Essence_27 (C1), Ewok_28 (C1), Flabslab_29 (C1), Fludd_27 (C1), Fongie_28 (C1), FoxtrotP1_28 (C1), FrayBell_34 (C1), FudgeTart_29 (C1), Gabriel_28 (C1), Gamgam_28 (C1), Ghost_28 (C1), Gizmo_30 (C1), GlutenPhree_26 (C1), Grasshills_32 (C1), Grungle_21 (C1), Guwapp_28 (C1), Halldule_24 (C1), HyRo_27 (C1), I3_30 (C1), IkeLoa_24 (C1), InigoMontoya_29 (C1), InterFolia_35 (C1), Iota_25 (C1), Issimir_28 (C1), Izajani_29 (C1), JPickles_26 (C1), Janiyra_28 (C1), JayJay_31 (C1), Jaygup_28 (C1), Jedediah_28 (C1), Jemmno_28 (C1), Jessibeth14_27 (C1), Jezreel_27 (C1), JigglyPuff_28 (C1), JulietS_23 (C1), JustHall_27 (C1), Kamryn_28 (C1), Kboogie_28 (C1), Khaleesi_27 (C1), Koguma_24 (C1), LRRHood_25 (C1), Latch_28 (C1), Lee7_27 (C1), Lethe_27 (C1), LifeSavor_29 (C1), LinStu_28 (C1), Littleton_28 (C1), Loanshark_28 (C1), LolaVinca_31 (C1), LordLeafot_33 (C1), Lukilu_21 (C1),

Maby2021_29 (C1), Mangeria_31 (C1), Matsumoto_27 (C1), McGee_27 (C1), McWolfish_27 (C1), Megamind_28 (C1), Melpomini_27 (C1), MikeLiesIn_28 (C1), Mikro_26 (C1), MoMoMixon_29 (C1), Momo_27 (C1), Morizzled23_27 (C1), Naija_28 (C1), Napoleon13_27 (C1), Nappy_29 (C1), Naval22_30 (C1), NedWong_29 (C1), Ngannou_26 (C1), Nidhogg_29 (C1), NoodleTree_27 (C1), Norm_28 (C1), NuevoMundo_31 (C1), ParkTD_27 (C1), Patter_28 (C1), Phlegm_30 (C1), Phox_27 (C1), Phusco_28 (C1), Pier_30 (C1), Pinkcreek_20 (C1), Pio_31 (C1), Pivoine_28 (C1), Pleione_30 (C1), Primadonna_23 (C1), PurduePete_27 (C1), QBert_26 (C1), Quasimodo_28 (C1), Rabinovish_27 (C1), Rahel_28 (C1), Rizal_26 (C1), RoMag_23 (C1), Ronan_23 (C1), Roots515_28 (C1), SVoro_27 (C1), Salacia_30 (C1), Sauce_29 (C1), ScottMcG_28 (C1), Sebata_28 (C1), Shaqnato_24 (C1), Shelob_30 (C1), ShiaLabeouf_28 (C1), Shifa_25 (C1), Shnickers_28 (C1), Shrimp_28 (C1), SilverDipper_29 (C1), SmallFry_28 (C1), Spec_26 (C1), Specks_33 (C1), Sprinklers_28 (C1), Spud_30 (C1), SrishMeg2525_27 (C1), StephanieG_28 (C1), StubbySaigey_27 (C1), Stubby_26 (C1), Tainan_33 (C1), Teardrop_27 (C1), TinyTim_28 (C1), Tonenili_32 (C1), Tortoise16_27 (C1), Trinitium_27 (C1), Turret_26 (C1), Tyke_30 (C1), ValleyTerrace_28 (C1), Wally_27 (C1), Willis_28 (C1), Yassified_25 (C1), YemiJoy2021_29 (C1), YoungMoneyMata_28 (C1), Yucca_28 (C1), Zalkecks_30 (C1), Zeenon_30 (C1), ZygoTaiga_28 (C1),

Start 8:

- Found in 13 of 225 (5.8%) of genes in pham
- Manual Annotations of this start: 2 of 186
- Called 53.8% of time when present
- Phage (with cluster) where this start called: Bae_54 (B5), DigitDog_53 (B5), Mysterious_53 (B5), Nangang_53 (B5), Nehemiah_52 (B5), Rich_53 (B5), Shenyu_53 (B5),

Start 10:

- Found in 1 of 225 (0.4%) of genes in pham
- Manual Annotations of this start: 1 of 186
- Called 100.0% of time when present
- Phage (with cluster) where this start called: LilMcDreamy_51 (B12),

Start 11:

- Found in 27 of 225 (12.0%) of genes in pham
- Manual Annotations of this start: 11 of 186
- Called 74.1% of time when present
- Phage (with cluster) where this start called: 39HC_046 (B6), 40BC_046 (B6), Acadian_53 (B5), BirdsNest_56 (B13), Donny_54 (B5), EastView9101_52 (B5), ForDig_48 (B6), Hashim76_56 (B13), Hosp_045 (B6), Jolie1_047 (B6), KarasumaRum_53 (B5), KayaCho_46 (B6), Phelemich_51 (B5), Reprobate_52 (B5), Rita130_52 (B5), Serendipitous_52 (B5), SirJeffery_52 (B5), StinkyVeggy_53 (B5), Suigeneris_54 (B5), Zenteno07_57 (B13),

Summary by clusters:

There are 5 clusters represented in this pham: B5, C1, B12, B6, B13,

Info for manual annotations of cluster B12:

- Start number 10 was manually annotated 1 time for cluster B12.

Info for manual annotations of cluster B13:

- Start number 11 was manually annotated 3 times for cluster B13.

Info for manual annotations of cluster B5:

- Start number 8 was manually annotated 2 times for cluster B5.
- Start number 11 was manually annotated 7 times for cluster B5.

Info for manual annotations of cluster B6:

- Start number 11 was manually annotated 1 time for cluster B6.

Info for manual annotations of cluster C1:

- Start number 7 was manually annotated 172 times for cluster C1.

Gene Information:

Gene: 39HC_046 Start: 45589, Stop: 45425, Start Num: 11

Candidate Starts for 39HC_046:

(Start: 11 @45589 has 11 MA's), (13, 45565), (14, 45550), (16, 45502), (20, 45457),

Gene: 40BC_046 Start: 45589, Stop: 45425, Start Num: 11

Candidate Starts for 40BC_046:

(Start: 11 @45589 has 11 MA's), (13, 45565), (14, 45550), (16, 45502), (20, 45457),

Gene: Ablatia_26 Start: 8347, Stop: 8547, Start Num: 7

Candidate Starts for Ablatia_26:

(Start: 7 @8347 has 172 MA's), (12, 8383), (19, 8485), (20, 8509),

Gene: Acadian_53 Start: 48105, Stop: 47941, Start Num: 11

Candidate Starts for Acadian_53:

(Start: 8 @48117 has 2 MA's), (Start: 11 @48105 has 11 MA's), (17, 48009), (20, 47973),

Gene: Ading_28 Start: 8607, Stop: 8807, Start Num: 7

Candidate Starts for Ading_28:

(Start: 7 @8607 has 172 MA's), (12, 8643), (19, 8745), (20, 8769),

Gene: Adlitam_28 Start: 8624, Stop: 8824, Start Num: 7

Candidate Starts for Adlitam_28:

(Start: 7 @8624 has 172 MA's), (19, 8762), (20, 8786),

Gene: Alice_23 Start: 7705, Stop: 7905, Start Num: 7

Candidate Starts for Alice_23:

(Start: 7 @7705 has 172 MA's), (12, 7741), (19, 7843), (20, 7867),

Gene: Amataga_28 Start: 8628, Stop: 8828, Start Num: 7

Candidate Starts for Amataga_28:

(Start: 7 @8628 has 172 MA's), (19, 8766), (20, 8790),

Gene: ArcherS7_27 Start: 8624, Stop: 8824, Start Num: 7

Candidate Starts for ArcherS7_27:

(Start: 7 @8624 has 172 MA's), (19, 8762), (20, 8786),

Gene: Asterius_29 Start: 8896, Stop: 9096, Start Num: 7

Candidate Starts for Asterius_29:

(Start: 7 @8896 has 172 MA's), (12, 8932), (19, 9034), (20, 9058),

Gene: Astraea_29 Start: 8801, Stop: 9001, Start Num: 7

Candidate Starts for Astraea_29:

(Start: 7 @8801 has 172 MA's), (12, 8837), (19, 8939), (20, 8963),

Gene: Atlantean_28 Start: 8628, Stop: 8828, Start Num: 7

Candidate Starts for Atlantean_28:

(Start: 7 @8628 has 172 MA's), (19, 8766), (20, 8790),

Gene: Audrick_30 Start: 8607, Stop: 8807, Start Num: 7

Candidate Starts for Audrick_30:

(Start: 7 @8607 has 172 MA's), (19, 8745), (20, 8769),

Gene: Ava3_29 Start: 9173, Stop: 9373, Start Num: 7

Candidate Starts for Ava3_29:

(Start: 7 @9173 has 172 MA's), (9, 9194), (19, 9311), (20, 9335),

Gene: Babyland_27 Start: 8069, Stop: 8269, Start Num: 7

Candidate Starts for Babyland_27:

(Start: 7 @8069 has 172 MA's), (12, 8105), (19, 8207), (20, 8231),

Gene: BackyardAgain_25 Start: 8053, Stop: 8253, Start Num: 7

Candidate Starts for BackyardAgain_25:

(Start: 7 @8053 has 172 MA's), (9, 8074), (19, 8191), (20, 8215),

Gene: BadAgartude_29 Start: 9263, Stop: 9463, Start Num: 7

Candidate Starts for BadAgartude_29:

(Start: 7 @9263 has 172 MA's), (12, 9299), (19, 9401), (20, 9425),

Gene: Bae_54 Start: 49393, Stop: 49217, Start Num: 8

Candidate Starts for Bae_54:

(Start: 8 @49393 has 2 MA's), (Start: 11 @49381 has 11 MA's), (15, 49315), (17, 49285), (20, 49249),

Gene: BananaFence_29 Start: 9060, Stop: 9260, Start Num: 7

Candidate Starts for BananaFence_29:

(Start: 7 @9060 has 172 MA's), (12, 9096), (19, 9198), (20, 9222),

Gene: Bangla1971_27 Start: 8624, Stop: 8824, Start Num: 7

Candidate Starts for Bangla1971_27:

(Start: 7 @8624 has 172 MA's), (9, 8645), (19, 8762), (20, 8786),

Gene: Basquiat_27 Start: 8050, Stop: 8250, Start Num: 7

Candidate Starts for Basquiat_27:

(Start: 7 @8050 has 172 MA's), (12, 8086), (19, 8188), (20, 8212),

Gene: BeanWater_24 Start: 9017, Stop: 9217, Start Num: 7

Candidate Starts for BeanWater_24:

(Start: 7 @9017 has 172 MA's), (19, 9155), (20, 9179),

Gene: Belieber_24 Start: 7817, Stop: 8017, Start Num: 7

Candidate Starts for Belieber_24:

(Start: 7 @7817 has 172 MA's), (12, 7853), (19, 7955), (20, 7979),

Gene: BigCity_32 Start: 10153, Stop: 10353, Start Num: 7

Candidate Starts for BigCity_32:

(Start: 7 @10153 has 172 MA's), (9, 10174), (19, 10291), (20, 10315),

Gene: Bigswole_34 Start: 10967, Stop: 11167, Start Num: 7

Candidate Starts for Bigswole_34:

(Start: 7 @10967 has 172 MA's), (19, 11105), (20, 11129),

Gene: Bipolarisk_27 Start: 8890, Stop: 9090, Start Num: 7

Candidate Starts for Bipolarisk_27:

(Start: 7 @8890 has 172 MA's), (9, 8911), (19, 9028), (20, 9052),

Gene: BirdsNest_56 Start: 47002, Stop: 46829, Start Num: 11

Candidate Starts for BirdsNest_56:

(5, 47173), (Start: 11 @47002 has 11 MA's), (13, 46978), (19, 46894), (20, 46870), (21, 46864),

Gene: Blackbrain_26 Start: 7866, Stop: 8066, Start Num: 7

Candidate Starts for Blackbrain_26:

(Start: 7 @7866 has 172 MA's), (12, 7902), (19, 8004), (20, 8028),

Gene: Blackdragon_23 Start: 7664, Stop: 7864, Start Num: 7

Candidate Starts for Blackdragon_23:

(Start: 7 @7664 has 172 MA's), (12, 7700), (19, 7802), (20, 7826),

Gene: Blubba_22 Start: 7354, Stop: 7554, Start Num: 7

Candidate Starts for Blubba_22:

(Start: 7 @7354 has 172 MA's), (9, 7375), (19, 7492), (20, 7516),

Gene: Bonray_28 Start: 9164, Stop: 9364, Start Num: 7

Candidate Starts for Bonray_28:

(Start: 7 @9164 has 172 MA's), (12, 9200), (19, 9302), (20, 9326),

Gene: Bread_29 Start: 9173, Stop: 9373, Start Num: 7

Candidate Starts for Bread_29:

(Start: 7 @9173 has 172 MA's), (9, 9194), (19, 9311), (20, 9335),

Gene: Breeniome_28 Start: 8047, Stop: 8247, Start Num: 7

Candidate Starts for Breeniome_28:

(Start: 7 @8047 has 172 MA's), (9, 8068), (19, 8185), (20, 8209),

Gene: Burrough_28 Start: 8890, Stop: 9090, Start Num: 7

Candidate Starts for Burrough_28:

(Start: 7 @8890 has 172 MA's), (9, 8911), (19, 9028), (20, 9052),

Gene: Bxz1_28 Start: 9633, Stop: 9833, Start Num: 7

Candidate Starts for Bxz1_28:

(Start: 7 @9633 has 172 MA's), (9, 9654), (19, 9771), (20, 9795),

Gene: Cactojaque_25 Start: 7755, Stop: 7955, Start Num: 7

Candidate Starts for Cactojaque_25:

(Start: 7 @7755 has 172 MA's), (12, 7791), (19, 7893), (20, 7917),

Gene: Cali_28 Start: 10197, Stop: 10397, Start Num: 7
Candidate Starts for Cali_28:
(Start: 7 @10197 has 172 MA's), (12, 10233), (19, 10335), (20, 10359),

Gene: Cane17_21 Start: 7226, Stop: 7426, Start Num: 7
Candidate Starts for Cane17_21:
(Start: 7 @7226 has 172 MA's), (12, 7262), (19, 7364), (20, 7388),

Gene: Capablanca_30 Start: 9753, Stop: 9953, Start Num: 7
Candidate Starts for Capablanca_30:
(Start: 7 @9753 has 172 MA's), (19, 9891), (20, 9915),

Gene: Caravan_26 Start: 8443, Stop: 8643, Start Num: 7
Candidate Starts for Caravan_26:
(Start: 7 @8443 has 172 MA's), (19, 8581), (20, 8605),

Gene: Catera_26 Start: 8051, Stop: 8251, Start Num: 7
Candidate Starts for Catera_26:
(Start: 7 @8051 has 172 MA's), (9, 8072), (19, 8189), (20, 8213),

Gene: Chargie21_27 Start: 8050, Stop: 8250, Start Num: 7
Candidate Starts for Chargie21_27:
(Start: 7 @8050 has 172 MA's), (12, 8086), (19, 8188), (20, 8212),

Gene: CharlieB_28 Start: 8204, Stop: 8404, Start Num: 7
Candidate Starts for CharlieB_28:
(Start: 7 @8204 has 172 MA's), (9, 8225), (19, 8342), (20, 8366),

Gene: ChaylaJr_27 Start: 8137, Stop: 8337, Start Num: 7
Candidate Starts for ChaylaJr_27:
(Start: 7 @8137 has 172 MA's), (12, 8173), (19, 8275), (20, 8299),

Gene: ChickenPhender_27 Start: 8095, Stop: 8295, Start Num: 7
Candidate Starts for ChickenPhender_27:
(Start: 7 @8095 has 172 MA's), (12, 8131), (19, 8233), (20, 8257),

Gene: Chomp_28 Start: 8628, Stop: 8828, Start Num: 7
Candidate Starts for Chomp_28:
(Start: 7 @8628 has 172 MA's), (12, 8664), (19, 8766), (20, 8790),

Gene: CindyLou_28 Start: 8628, Stop: 8828, Start Num: 7
Candidate Starts for CindyLou_28:
(Start: 7 @8628 has 172 MA's), (19, 8766), (20, 8790),

Gene: Colt_21 Start: 7232, Stop: 7432, Start Num: 7
Candidate Starts for Colt_21:
(Start: 7 @7232 has 172 MA's), (12, 7268), (19, 7370), (20, 7394),

Gene: Concombres_27 Start: 9399, Stop: 9599, Start Num: 7
Candidate Starts for Concombres_27:
(Start: 7 @9399 has 172 MA's), (9, 9420), (19, 9537), (20, 9561),

Gene: DTDevon_29 Start: 9792, Stop: 9992, Start Num: 7
Candidate Starts for DTDevon_29:
(Start: 7 @9792 has 172 MA's), (9, 9813), (19, 9930), (20, 9954),

Gene: Daffodil_30 Start: 9173, Stop: 9373, Start Num: 7
Candidate Starts for Daffodil_30:
(Start: 7 @9173 has 172 MA's), (9, 9194), (19, 9311), (20, 9335),

Gene: Dandelion_32 Start: 10487, Stop: 10687, Start Num: 7
Candidate Starts for Dandelion_32:
(Start: 7 @10487 has 172 MA's), (9, 10508), (19, 10625), (20, 10649),

Gene: Darko_27 Start: 9029, Stop: 9229, Start Num: 7
Candidate Starts for Darko_27:
(Start: 7 @9029 has 172 MA's), (12, 9065), (19, 9167), (20, 9191),

Gene: DeejaClivia_24 Start: 7714, Stop: 7914, Start Num: 7
Candidate Starts for DeejaClivia_24:
(Start: 7 @7714 has 172 MA's), (12, 7750), (19, 7852), (20, 7876),

Gene: Delilah_28 Start: 9173, Stop: 9373, Start Num: 7
Candidate Starts for Delilah_28:
(Start: 7 @9173 has 172 MA's), (9, 9194), (19, 9311), (20, 9335),

Gene: Delylah_29 Start: 8956, Stop: 9156, Start Num: 7
Candidate Starts for Delylah_29:
(Start: 7 @8956 has 172 MA's), (12, 8992), (19, 9094), (20, 9118),

Gene: Demodog_26 Start: 9399, Stop: 9599, Start Num: 7
Candidate Starts for Demodog_26:
(Start: 7 @9399 has 172 MA's), (9, 9420), (19, 9537), (20, 9561),

Gene: Derek_29 Start: 8585, Stop: 8785, Start Num: 7
Candidate Starts for Derek_29:
(Start: 7 @8585 has 172 MA's), (9, 8606), (20, 8747),

Gene: Dietrick_23 Start: 7823, Stop: 8023, Start Num: 7
Candidate Starts for Dietrick_23:
(Start: 7 @7823 has 172 MA's), (12, 7859), (19, 7961), (20, 7985),

Gene: DigitDog_53 Start: 48113, Stop: 47937, Start Num: 8
Candidate Starts for DigitDog_53:
(Start: 8 @48113 has 2 MA's), (Start: 11 @48101 has 11 MA's), (17, 48005), (20, 47969),

Gene: DirtMonster_27 Start: 9717, Stop: 9917, Start Num: 7
Candidate Starts for DirtMonster_27:
(Start: 7 @9717 has 172 MA's), (9, 9738), (19, 9855), (20, 9879),

Gene: Domi_23 Start: 8448, Stop: 8648, Start Num: 7
Candidate Starts for Domi_23:
(Start: 7 @8448 has 172 MA's), (12, 8484), (19, 8586), (20, 8610),

Gene: Donny_54 Start: 48395, Stop: 48231, Start Num: 11

Candidate Starts for Donny_54:
(Start: 11 @48395 has 11 MA's), (17, 48299), (20, 48263),

Gene: DrPhinkDaddy_28 Start: 9170, Stop: 9370, Start Num: 7
Candidate Starts for DrPhinkDaddy_28:
(Start: 7 @9170 has 172 MA's), (9, 9191), (19, 9308), (20, 9332),

Gene: Drazdys_28 Start: 8958, Stop: 9158, Start Num: 7
Candidate Starts for Drazdys_28:
(Start: 7 @8958 has 172 MA's), (12, 8994), (19, 9096), (20, 9120),

Gene: ET08_23 Start: 8632, Stop: 8832, Start Num: 7
Candidate Starts for ET08_23:
(Start: 7 @8632 has 172 MA's), (12, 8668), (19, 8770), (20, 8794),

Gene: EastView9101_52 Start: 48042, Stop: 47878, Start Num: 11
Candidate Starts for EastView9101_52:
(Start: 11 @48042 has 11 MA's), (17, 47946), (20, 47910),

Gene: EasyJones_27 Start: 7797, Stop: 7997, Start Num: 7
Candidate Starts for EasyJones_27:
(Start: 7 @7797 has 172 MA's), (9, 7818), (19, 7935), (20, 7959),

Gene: EggyFarm_32 Start: 10153, Stop: 10353, Start Num: 7
Candidate Starts for EggyFarm_32:
(Start: 7 @10153 has 172 MA's), (9, 10174), (19, 10291), (20, 10315),

Gene: EmToTheThree_31 Start: 10587, Stop: 10787, Start Num: 7
Candidate Starts for EmToTheThree_31:
(Start: 7 @10587 has 172 MA's), (9, 10608), (19, 10725), (20, 10749),

Gene: EmmaElysia_26 Start: 7815, Stop: 8015, Start Num: 7
Candidate Starts for EmmaElysia_26:
(Start: 7 @7815 has 172 MA's), (12, 7851), (19, 7953), (20, 7977),

Gene: Erdmann_29 Start: 9173, Stop: 9373, Start Num: 7
Candidate Starts for Erdmann_29:
(Start: 7 @9173 has 172 MA's), (9, 9194), (19, 9311), (20, 9335),

Gene: ErnieJ_29 Start: 8996, Stop: 9196, Start Num: 7
Candidate Starts for ErnieJ_29:
(Start: 7 @8996 has 172 MA's), (12, 9032), (19, 9134), (20, 9158),

Gene: Essence_27 Start: 8350, Stop: 8550, Start Num: 7
Candidate Starts for Essence_27:
(Start: 7 @8350 has 172 MA's), (12, 8386), (19, 8488), (20, 8512),

Gene: Ewok_28 Start: 9176, Stop: 9376, Start Num: 7
Candidate Starts for Ewok_28:
(Start: 7 @9176 has 172 MA's), (9, 9197), (19, 9314), (20, 9338),

Gene: Flabslab_29 Start: 9106, Stop: 9306, Start Num: 7
Candidate Starts for Flabslab_29:

(Start: 7 @9106 has 172 MA's), (12, 9142), (19, 9244), (20, 9268),

Gene: Fludd_27 Start: 8051, Stop: 8251, Start Num: 7

Candidate Starts for Fludd_27:

(Start: 7 @8051 has 172 MA's), (12, 8087), (19, 8189), (20, 8213),

Gene: Fongie_28 Start: 9708, Stop: 9908, Start Num: 7

Candidate Starts for Fongie_28:

(Start: 7 @9708 has 172 MA's), (12, 9744), (19, 9846), (20, 9870),

Gene: ForDig_48 Start: 45828, Stop: 45664, Start Num: 11

Candidate Starts for ForDig_48:

(Start: 11 @45828 has 11 MA's), (13, 45804), (14, 45789), (16, 45741), (20, 45696),

Gene: FoxtrotP1_28 Start: 9501, Stop: 9701, Start Num: 7

Candidate Starts for FoxtrotP1_28:

(Start: 7 @9501 has 172 MA's), (9, 9522), (19, 9639), (20, 9663),

Gene: FrayBell_34 Start: 10744, Stop: 10944, Start Num: 7

Candidate Starts for FrayBell_34:

(Start: 7 @10744 has 172 MA's), (12, 10780), (19, 10882), (20, 10906),

Gene: FudgeTart_29 Start: 9173, Stop: 9373, Start Num: 7

Candidate Starts for FudgeTart_29:

(Start: 7 @9173 has 172 MA's), (9, 9194), (19, 9311), (20, 9335),

Gene: Gabriel_28 Start: 8047, Stop: 8247, Start Num: 7

Candidate Starts for Gabriel_28:

(Start: 7 @8047 has 172 MA's), (12, 8083), (19, 8185), (20, 8209),

Gene: Gamgam_28 Start: 8628, Stop: 8828, Start Num: 7

Candidate Starts for Gamgam_28:

(Start: 7 @8628 has 172 MA's), (19, 8766), (20, 8790),

Gene: Ghost_28 Start: 8628, Stop: 8828, Start Num: 7

Candidate Starts for Ghost_28:

(Start: 7 @8628 has 172 MA's), (19, 8766), (20, 8790),

Gene: Gizmo_30 Start: 9175, Stop: 9375, Start Num: 7

Candidate Starts for Gizmo_30:

(Start: 7 @9175 has 172 MA's), (9, 9196), (19, 9313), (20, 9337),

Gene: GlutenPhree_26 Start: 8628, Stop: 8828, Start Num: 7

Candidate Starts for GlutenPhree_26:

(Start: 7 @8628 has 172 MA's), (19, 8766), (20, 8790),

Gene: Grasshills_32 Start: 10153, Stop: 10353, Start Num: 7

Candidate Starts for Grasshills_32:

(Start: 7 @10153 has 172 MA's), (9, 10174), (19, 10291), (20, 10315),

Gene: Grungle_21 Start: 6747, Stop: 6947, Start Num: 7

Candidate Starts for Grungle_21:

(Start: 7 @6747 has 172 MA's), (12, 6783), (19, 6885), (20, 6909),

Gene: Guwapp_28 Start: 8585, Stop: 8785, Start Num: 7
Candidate Starts for Guwapp_28:
(Start: 7 @8585 has 172 MA's), (9, 8606), (19, 8723), (20, 8747),

Gene: Halldule_24 Start: 7417, Stop: 7617, Start Num: 7
Candidate Starts for Halldule_24:
(Start: 7 @7417 has 172 MA's), (12, 7453), (19, 7555), (20, 7579),

Gene: Hashim76_56 Start: 47575, Stop: 47402, Start Num: 11
Candidate Starts for Hashim76_56:
(2, 48184), (4, 47881), (5, 47743), (Start: 11 @47575 has 11 MA's), (14, 47536), (19, 47467), (20, 47443), (21, 47437),

Gene: Hosp_045 Start: 44019, Stop: 43855, Start Num: 11
Candidate Starts for Hosp_045:
(Start: 11 @44019 has 11 MA's), (13, 43995), (14, 43980), (16, 43932), (20, 43887),

Gene: HyRo_27 Start: 9363, Stop: 9563, Start Num: 7
Candidate Starts for HyRo_27:
(Start: 7 @9363 has 172 MA's), (12, 9399), (19, 9501), (20, 9525),

Gene: I3_30 Start: 9740, Stop: 9940, Start Num: 7
Candidate Starts for I3_30:
(Start: 7 @9740 has 172 MA's), (9, 9761), (19, 9878), (20, 9902),

Gene: IkeLoa_24 Start: 8474, Stop: 8674, Start Num: 7
Candidate Starts for IkeLoa_24:
(Start: 7 @8474 has 172 MA's), (12, 8510), (19, 8612), (20, 8636),

Gene: InigoMontoya_29 Start: 8589, Stop: 8789, Start Num: 7
Candidate Starts for InigoMontoya_29:
(Start: 7 @8589 has 172 MA's), (19, 8727), (20, 8751),

Gene: InterFolia_35 Start: 11279, Stop: 11479, Start Num: 7
Candidate Starts for InterFolia_35:
(Start: 7 @11279 has 172 MA's), (9, 11300), (19, 11417), (20, 11441),

Gene: Iota_25 Start: 8708, Stop: 8908, Start Num: 7
Candidate Starts for Iota_25:
(Start: 7 @8708 has 172 MA's), (9, 8729), (19, 8846), (20, 8870),

Gene: Issimir_28 Start: 9168, Stop: 9368, Start Num: 7
Candidate Starts for Issimir_28:
(Start: 7 @9168 has 172 MA's), (12, 9204), (19, 9306), (20, 9330),

Gene: Izajani_29 Start: 9173, Stop: 9373, Start Num: 7
Candidate Starts for Izajani_29:
(Start: 7 @9173 has 172 MA's), (9, 9194), (19, 9311), (20, 9335),

Gene: JPickles_26 Start: 7825, Stop: 8025, Start Num: 7
Candidate Starts for JPickles_26:
(Start: 7 @7825 has 172 MA's), (12, 7861), (19, 7963), (20, 7987),

Gene: Janiyra_28 Start: 8607, Stop: 8807, Start Num: 7
Candidate Starts for Janiyra_28:
(Start: 7 @8607 has 172 MA's), (19, 8745), (20, 8769),

Gene: JayJay_31 Start: 9141, Stop: 9341, Start Num: 7
Candidate Starts for JayJay_31:
(Start: 7 @9141 has 172 MA's), (12, 9177), (19, 9279), (20, 9303),

Gene: Jaygup_28 Start: 8624, Stop: 8824, Start Num: 7
Candidate Starts for Jaygup_28:
(Start: 7 @8624 has 172 MA's), (12, 8660), (19, 8762), (20, 8786),

Gene: Jedediah_28 Start: 8093, Stop: 8293, Start Num: 7
Candidate Starts for Jedediah_28:
(Start: 7 @8093 has 172 MA's), (12, 8129), (19, 8231), (20, 8255),

Gene: Jemmno_28 Start: 8628, Stop: 8828, Start Num: 7
Candidate Starts for Jemmno_28:
(Start: 7 @8628 has 172 MA's), (19, 8766), (20, 8790),

Gene: Jessibeth14_27 Start: 8896, Stop: 9096, Start Num: 7
Candidate Starts for Jessibeth14_27:
(Start: 7 @8896 has 172 MA's), (12, 8932), (19, 9034), (20, 9058),

Gene: Jezreel_27 Start: 8645, Stop: 8845, Start Num: 7
Candidate Starts for Jezreel_27:
(Start: 7 @8645 has 172 MA's), (12, 8681), (19, 8783), (20, 8807),

Gene: JigglyPuff_28 Start: 9449, Stop: 9649, Start Num: 7
Candidate Starts for JigglyPuff_28:
(Start: 7 @9449 has 172 MA's), (9, 9470), (19, 9587), (20, 9611),

Gene: Jolie1_047 Start: 45807, Stop: 45643, Start Num: 11
Candidate Starts for Jolie1_047:
(6, 45969), (Start: 11 @45807 has 11 MA's), (13, 45783), (14, 45768), (16, 45720), (20, 45675),

Gene: JulietS_23 Start: 7050, Stop: 7250, Start Num: 7
Candidate Starts for JulietS_23:
(Start: 7 @7050 has 172 MA's), (12, 7086), (19, 7188), (20, 7212),

Gene: JustHall_27 Start: 9073, Stop: 9273, Start Num: 7
Candidate Starts for JustHall_27:
(Start: 7 @9073 has 172 MA's), (9, 9094), (19, 9211), (20, 9235),

Gene: Kamryn_28 Start: 8952, Stop: 9152, Start Num: 7
Candidate Starts for Kamryn_28:
(Start: 7 @8952 has 172 MA's), (19, 9090), (20, 9114),

Gene: KarasumaRum_53 Start: 48252, Stop: 48088, Start Num: 11
Candidate Starts for KarasumaRum_53:
(Start: 8 @48264 has 2 MA's), (Start: 11 @48252 has 11 MA's), (17, 48156), (20, 48120),

Gene: KayaCho_46 Start: 45592, Stop: 45428, Start Num: 11
Candidate Starts for KayaCho_46:
(Start: 11 @45592 has 11 MA's), (13, 45568), (14, 45553), (16, 45505), (20, 45460),

Gene: Kboogie_28 Start: 8106, Stop: 8306, Start Num: 7
Candidate Starts for Kboogie_28:
(Start: 7 @8106 has 172 MA's), (12, 8142), (19, 8244), (20, 8268),

Gene: Khaleesi_27 Start: 8923, Stop: 9123, Start Num: 7
Candidate Starts for Khaleesi_27:
(Start: 7 @8923 has 172 MA's), (12, 8959), (19, 9061), (20, 9085),

Gene: Koguma_24 Start: 7393, Stop: 7593, Start Num: 7
Candidate Starts for Koguma_24:
(Start: 7 @7393 has 172 MA's), (12, 7429), (19, 7531), (20, 7555),

Gene: LRRHood_25 Start: 9316, Stop: 9516, Start Num: 7
Candidate Starts for LRRHood_25:
(Start: 7 @9316 has 172 MA's), (12, 9352), (19, 9454), (20, 9478),

Gene: Latch_28 Start: 8628, Stop: 8828, Start Num: 7
Candidate Starts for Latch_28:
(Start: 7 @8628 has 172 MA's), (19, 8766), (20, 8790),

Gene: Lee7_27 Start: 9170, Stop: 9370, Start Num: 7
Candidate Starts for Lee7_27:
(Start: 7 @9170 has 172 MA's), (9, 9191), (19, 9308), (20, 9332),

Gene: Lethe_27 Start: 8867, Stop: 9067, Start Num: 7
Candidate Starts for Lethe_27:
(Start: 7 @8867 has 172 MA's), (12, 8903), (19, 9005), (20, 9029),

Gene: LifeSavor_29 Start: 8624, Stop: 8824, Start Num: 7
Candidate Starts for LifeSavor_29:
(Start: 7 @8624 has 172 MA's), (9, 8645), (19, 8762), (20, 8786),

Gene: LilMcDreamy_51 Start: 47791, Stop: 47630, Start Num: 10
Candidate Starts for LilMcDreamy_51:
(Start: 10 @47791 has 1 MA's), (15, 47722), (18, 47689), (21, 47650), (22, 47644),

Gene: LinStu_28 Start: 9526, Stop: 9726, Start Num: 7
Candidate Starts for LinStu_28:
(Start: 7 @9526 has 172 MA's), (12, 9562), (19, 9664), (20, 9688),

Gene: Littleton_28 Start: 8628, Stop: 8828, Start Num: 7
Candidate Starts for Littleton_28:
(Start: 7 @8628 has 172 MA's), (12, 8664), (19, 8766), (20, 8790),

Gene: Loanshark_28 Start: 9173, Stop: 9373, Start Num: 7
Candidate Starts for Loanshark_28:
(Start: 7 @9173 has 172 MA's), (9, 9194), (19, 9311), (20, 9335),

Gene: LolaVinca_31 Start: 10385, Stop: 10585, Start Num: 7

Candidate Starts for LolaVinca_31:
(Start: 7 @10385 has 172 MA's), (9, 10406), (19, 10523), (20, 10547),

Gene: LordLeafolot_33 Start: 10743, Stop: 10943, Start Num: 7
Candidate Starts for LordLeafolot_33:
(Start: 7 @10743 has 172 MA's), (12, 10779), (19, 10881), (20, 10905),

Gene: Lukilu_21 Start: 7767, Stop: 7967, Start Num: 7
Candidate Starts for Lukilu_21:
(Start: 7 @7767 has 172 MA's), (12, 7803), (19, 7905), (20, 7929),

Gene: Maby2021_29 Start: 9173, Stop: 9373, Start Num: 7
Candidate Starts for Maby2021_29:
(Start: 7 @9173 has 172 MA's), (9, 9194), (19, 9311), (20, 9335),

Gene: Mangeria_31 Start: 9699, Stop: 9899, Start Num: 7
Candidate Starts for Mangeria_31:
(Start: 7 @9699 has 172 MA's), (12, 9735), (19, 9837), (20, 9861),

Gene: Matsumoto_27 Start: 8589, Stop: 8789, Start Num: 7
Candidate Starts for Matsumoto_27:
(Start: 7 @8589 has 172 MA's), (9, 8610), (19, 8727), (20, 8751),

Gene: McGee_27 Start: 7815, Stop: 8015, Start Num: 7
Candidate Starts for McGee_27:
(Start: 7 @7815 has 172 MA's), (12, 7851), (19, 7953), (20, 7977),

Gene: McWolfish_27 Start: 8923, Stop: 9123, Start Num: 7
Candidate Starts for McWolfish_27:
(Start: 7 @8923 has 172 MA's), (12, 8959), (19, 9061), (20, 9085),

Gene: Megamind_28 Start: 9164, Stop: 9364, Start Num: 7
Candidate Starts for Megamind_28:
(Start: 7 @9164 has 172 MA's), (9, 9185), (19, 9302), (20, 9326),

Gene: Melpomini_27 Start: 8030, Stop: 8230, Start Num: 7
Candidate Starts for Melpomini_27:
(Start: 7 @8030 has 172 MA's), (9, 8051), (19, 8168), (20, 8192),

Gene: MikeLiesIn_28 Start: 9173, Stop: 9373, Start Num: 7
Candidate Starts for MikeLiesIn_28:
(Start: 7 @9173 has 172 MA's), (9, 9194), (19, 9311), (20, 9335),

Gene: Mikro_26 Start: 9659, Stop: 9859, Start Num: 7
Candidate Starts for Mikro_26:
(Start: 7 @9659 has 172 MA's), (9, 9680), (19, 9797), (20, 9821),

Gene: MoMoMixon_29 Start: 9490, Stop: 9690, Start Num: 7
Candidate Starts for MoMoMixon_29:
(Start: 7 @9490 has 172 MA's), (12, 9526), (19, 9628), (20, 9652),

Gene: Momo_27 Start: 8628, Stop: 8828, Start Num: 7
Candidate Starts for Momo_27:

(Start: 7 @8628 has 172 MA's), (19, 8766), (20, 8790),

Gene: Morizzled23_27 Start: 8030, Stop: 8230, Start Num: 7

Candidate Starts for Morizzled23_27:

(Start: 7 @8030 has 172 MA's), (9, 8051), (19, 8168), (20, 8192),

Gene: Mysterious_53 Start: 48246, Stop: 48070, Start Num: 8

Candidate Starts for Mysterious_53:

(Start: 8 @48246 has 2 MA's), (Start: 11 @48234 has 11 MA's), (17, 48138), (20, 48102),

Gene: Naija_28 Start: 8628, Stop: 8828, Start Num: 7

Candidate Starts for Naija_28:

(Start: 7 @8628 has 172 MA's), (9, 8649), (19, 8766), (20, 8790),

Gene: Nangang_53 Start: 48478, Stop: 48302, Start Num: 8

Candidate Starts for Nangang_53:

(Start: 8 @48478 has 2 MA's), (Start: 11 @48466 has 11 MA's), (17, 48370), (20, 48334),

Gene: Napoleon13_27 Start: 8049, Stop: 8249, Start Num: 7

Candidate Starts for Napoleon13_27:

(Start: 7 @8049 has 172 MA's), (9, 8070), (19, 8187), (20, 8211),

Gene: Nappy_29 Start: 9337, Stop: 9537, Start Num: 7

Candidate Starts for Nappy_29:

(Start: 7 @9337 has 172 MA's), (9, 9358), (19, 9475), (20, 9499),

Gene: Naval22_30 Start: 9213, Stop: 9413, Start Num: 7

Candidate Starts for Naval22_30:

(Start: 7 @9213 has 172 MA's), (9, 9234), (19, 9351), (20, 9375),

Gene: NedWong_29 Start: 9173, Stop: 9373, Start Num: 7

Candidate Starts for NedWong_29:

(Start: 7 @9173 has 172 MA's), (9, 9194), (19, 9311), (20, 9335),

Gene: Nehemiah_52 Start: 48246, Stop: 48070, Start Num: 8

Candidate Starts for Nehemiah_52:

(Start: 8 @48246 has 2 MA's), (Start: 11 @48234 has 11 MA's), (17, 48138), (20, 48102),

Gene: Ngannou_26 Start: 7804, Stop: 8004, Start Num: 7

Candidate Starts for Ngannou_26:

(Start: 7 @7804 has 172 MA's), (19, 7942), (20, 7966),

Gene: Nidhogg_29 Start: 9243, Stop: 9443, Start Num: 7

Candidate Starts for Nidhogg_29:

(Start: 7 @9243 has 172 MA's), (9, 9264), (19, 9381), (20, 9405),

Gene: NoodleTree_27 Start: 8939, Stop: 9139, Start Num: 7

Candidate Starts for NoodleTree_27:

(Start: 7 @8939 has 172 MA's), (19, 9077), (20, 9101),

Gene: Norm_28 Start: 9173, Stop: 9373, Start Num: 7

Candidate Starts for Norm_28:

(Start: 7 @9173 has 172 MA's), (9, 9194), (19, 9311), (20, 9335),

Gene: NuevoMundo_31 Start: 10230, Stop: 10430, Start Num: 7
Candidate Starts for NuevoMundo_31:
(Start: 7 @10230 has 172 MA's), (12, 10266), (19, 10368), (20, 10392),

Gene: ParkTD_27 Start: 9173, Stop: 9373, Start Num: 7
Candidate Starts for ParkTD_27:
(Start: 7 @9173 has 172 MA's), (9, 9194), (19, 9311), (20, 9335),

Gene: Patter_28 Start: 8645, Stop: 8845, Start Num: 7
Candidate Starts for Patter_28:
(Start: 7 @8645 has 172 MA's), (19, 8783), (20, 8807),

Gene: Phelemich_51 Start: 48233, Stop: 48069, Start Num: 11
Candidate Starts for Phelemich_51:
(Start: 8 @48245 has 2 MA's), (Start: 11 @48233 has 11 MA's), (15, 48167), (16, 48146), (17, 48137),
(20, 48101),

Gene: Phlegm_30 Start: 8628, Stop: 8828, Start Num: 7
Candidate Starts for Phlegm_30:
(Start: 7 @8628 has 172 MA's), (19, 8766), (20, 8790),

Gene: Phox_27 Start: 9340, Stop: 9540, Start Num: 7
Candidate Starts for Phox_27:
(Start: 7 @9340 has 172 MA's), (12, 9376), (19, 9478), (20, 9502),

Gene: Phusco_28 Start: 8624, Stop: 8824, Start Num: 7
Candidate Starts for Phusco_28:
(Start: 7 @8624 has 172 MA's), (9, 8645), (19, 8762), (20, 8786),

Gene: Pier_30 Start: 9331, Stop: 9531, Start Num: 7
Candidate Starts for Pier_30:
(Start: 7 @9331 has 172 MA's), (9, 9352), (19, 9469), (20, 9493),

Gene: Pinkcreek_20 Start: 7035, Stop: 7235, Start Num: 7
Candidate Starts for Pinkcreek_20:
(Start: 7 @7035 has 172 MA's), (12, 7071), (19, 7173), (20, 7197),

Gene: Pio_31 Start: 10022, Stop: 10222, Start Num: 7
Candidate Starts for Pio_31:
(Start: 7 @10022 has 172 MA's), (9, 10043), (19, 10160), (20, 10184),

Gene: Pivoine_28 Start: 8628, Stop: 8828, Start Num: 7
Candidate Starts for Pivoine_28:
(Start: 7 @8628 has 172 MA's), (19, 8766), (20, 8790),

Gene: Pleione_30 Start: 9173, Stop: 9373, Start Num: 7
Candidate Starts for Pleione_30:
(Start: 7 @9173 has 172 MA's), (9, 9194), (19, 9311), (20, 9335),

Gene: Primadonna_23 Start: 8280, Stop: 8480, Start Num: 7
Candidate Starts for Primadonna_23:
(Start: 7 @8280 has 172 MA's), (12, 8316), (19, 8418), (20, 8442),

Gene: PurduePete_27 Start: 8890, Stop: 9090, Start Num: 7

Candidate Starts for PurduePete_27:

(Start: 7 @8890 has 172 MA's), (9, 8911), (19, 9028), (20, 9052),

Gene: QBert_26 Start: 9340, Stop: 9540, Start Num: 7

Candidate Starts for QBert_26:

(Start: 7 @9340 has 172 MA's), (12, 9376), (19, 9478), (20, 9502),

Gene: Quasimodo_28 Start: 9588, Stop: 9788, Start Num: 7

Candidate Starts for Quasimodo_28:

(Start: 7 @9588 has 172 MA's), (19, 9726), (20, 9750),

Gene: Rabinovish_27 Start: 9628, Stop: 9828, Start Num: 7

Candidate Starts for Rabinovish_27:

(Start: 7 @9628 has 172 MA's), (12, 9664), (19, 9766), (20, 9790),

Gene: Rahel_28 Start: 8624, Stop: 8824, Start Num: 7

Candidate Starts for Rahel_28:

(Start: 7 @8624 has 172 MA's), (9, 8645), (19, 8762), (20, 8786),

Gene: Reprobate_52 Start: 48238, Stop: 48074, Start Num: 11

Candidate Starts for Reprobate_52:

(Start: 8 @48250 has 2 MA's), (Start: 11 @48238 has 11 MA's), (15, 48172), (16, 48151), (17, 48142), (20, 48106),

Gene: Rich_53 Start: 49684, Stop: 49508, Start Num: 8

Candidate Starts for Rich_53:

(Start: 8 @49684 has 2 MA's), (Start: 11 @49672 has 11 MA's), (15, 49606), (17, 49576), (20, 49540),

Gene: Rita130_52 Start: 48113, Stop: 47949, Start Num: 11

Candidate Starts for Rita130_52:

(Start: 11 @48113 has 11 MA's), (17, 48017), (20, 47981),

Gene: Rizal_26 Start: 8090, Stop: 8290, Start Num: 7

Candidate Starts for Rizal_26:

(Start: 7 @8090 has 172 MA's), (9, 8111), (19, 8228), (20, 8252),

Gene: RoMag_23 Start: 8425, Stop: 8625, Start Num: 7

Candidate Starts for RoMag_23:

(Start: 7 @8425 has 172 MA's), (12, 8461), (19, 8563), (20, 8587),

Gene: Ronan_23 Start: 6736, Stop: 6936, Start Num: 7

Candidate Starts for Ronan_23:

(Start: 7 @6736 has 172 MA's), (9, 6757), (19, 6874), (20, 6898),

Gene: Roots515_28 Start: 9172, Stop: 9372, Start Num: 7

Candidate Starts for Roots515_28:

(Start: 7 @9172 has 172 MA's), (9, 9193), (19, 9310), (20, 9334),

Gene: SVoro_27 Start: 9167, Stop: 9367, Start Num: 7

Candidate Starts for SVoro_27:

(Start: 7 @9167 has 172 MA's), (9, 9188), (19, 9305), (20, 9329),

Gene: Salacia_30 Start: 9173, Stop: 9373, Start Num: 7

Candidate Starts for Salacia_30:

(Start: 7 @9173 has 172 MA's), (9, 9194), (19, 9311), (20, 9335),

Gene: Sauce_29 Start: 9303, Stop: 9503, Start Num: 7

Candidate Starts for Sauce_29:

(Start: 7 @9303 has 172 MA's), (12, 9339), (19, 9441), (20, 9465),

Gene: ScottMcG_28 Start: 9483, Stop: 9683, Start Num: 7

Candidate Starts for ScottMcG_28:

(Start: 7 @9483 has 172 MA's), (12, 9519), (19, 9621), (20, 9645),

Gene: Sebata_28 Start: 9526, Stop: 9726, Start Num: 7

Candidate Starts for Sebata_28:

(Start: 7 @9526 has 172 MA's), (12, 9562), (19, 9664), (20, 9688),

Gene: Serendipitous_52 Start: 47955, Stop: 47791, Start Num: 11

Candidate Starts for Serendipitous_52:

(Start: 8 @47967 has 2 MA's), (Start: 11 @47955 has 11 MA's), (15, 47889), (18, 47856), (20, 47823),

Gene: Shaqnato_24 Start: 7750, Stop: 7950, Start Num: 7

Candidate Starts for Shaqnato_24:

(Start: 7 @7750 has 172 MA's), (12, 7786), (19, 7888), (20, 7912),

Gene: Shelob_30 Start: 10058, Stop: 10258, Start Num: 7

Candidate Starts for Shelob_30:

(Start: 7 @10058 has 172 MA's), (12, 10094), (19, 10196), (20, 10220),

Gene: Shenyu_53 Start: 48478, Stop: 48302, Start Num: 8

Candidate Starts for Shenyu_53:

(Start: 8 @48478 has 2 MA's), (Start: 11 @48466 has 11 MA's), (17, 48370), (20, 48334),

Gene: ShiaLabeouf_28 Start: 8624, Stop: 8824, Start Num: 7

Candidate Starts for ShiaLabeouf_28:

(Start: 7 @8624 has 172 MA's), (9, 8645), (19, 8762), (20, 8786),

Gene: Shifa_25 Start: 8809, Stop: 9009, Start Num: 7

Candidate Starts for Shifa_25:

(Start: 7 @8809 has 172 MA's), (12, 8845), (19, 8947), (20, 8971),

Gene: Shnickers_28 Start: 8624, Stop: 8824, Start Num: 7

Candidate Starts for Shnickers_28:

(Start: 7 @8624 has 172 MA's), (12, 8660), (19, 8762), (20, 8786),

Gene: Shrimp_28 Start: 9177, Stop: 9377, Start Num: 7

Candidate Starts for Shrimp_28:

(Start: 7 @9177 has 172 MA's), (9, 9198), (19, 9315), (20, 9339),

Gene: SilverDipper_29 Start: 8628, Stop: 8828, Start Num: 7

Candidate Starts for SilverDipper_29:

(Start: 7 @8628 has 172 MA's), (19, 8766), (20, 8790),

Gene: SirJeffery_52 Start: 48115, Stop: 47951, Start Num: 11

Candidate Starts for SirJeffery_52:

(Start: 11 @48115 has 11 MA's), (17, 48019), (20, 47983),

Gene: SmallFry_28 Start: 8624, Stop: 8824, Start Num: 7

Candidate Starts for SmallFry_28:

(Start: 7 @8624 has 172 MA's), (9, 8645), (19, 8762), (20, 8786),

Gene: Spec_26 Start: 8630, Stop: 8830, Start Num: 7

Candidate Starts for Spec_26:

(Start: 7 @8630 has 172 MA's), (12, 8666), (19, 8768), (20, 8792),

Gene: Specks_33 Start: 10462, Stop: 10662, Start Num: 7

Candidate Starts for Specks_33:

(Start: 7 @10462 has 172 MA's), (9, 10483), (19, 10600), (20, 10624),

Gene: Sprinklers_28 Start: 8665, Stop: 8865, Start Num: 7

Candidate Starts for Sprinklers_28:

(Start: 7 @8665 has 172 MA's), (12, 8701), (19, 8803), (20, 8827),

Gene: Spud_30 Start: 10022, Stop: 10222, Start Num: 7

Candidate Starts for Spud_30:

(Start: 7 @10022 has 172 MA's), (9, 10043), (19, 10160), (20, 10184),

Gene: SrishMeg2525_27 Start: 8890, Stop: 9090, Start Num: 7

Candidate Starts for SrishMeg2525_27:

(Start: 7 @8890 has 172 MA's), (9, 8911), (19, 9028), (20, 9052),

Gene: StephanieG_28 Start: 9356, Stop: 9556, Start Num: 7

Candidate Starts for StephanieG_28:

(Start: 7 @9356 has 172 MA's), (12, 9392), (19, 9494), (20, 9518),

Gene: StinkyVeggy_53 Start: 48252, Stop: 48088, Start Num: 11

Candidate Starts for StinkyVeggy_53:

(Start: 8 @48264 has 2 MA's), (Start: 11 @48252 has 11 MA's), (17, 48156), (20, 48120),

Gene: Stubby_26 Start: 8436, Stop: 8636, Start Num: 7

Candidate Starts for Stubby_26:

(Start: 7 @8436 has 172 MA's), (12, 8472), (19, 8574), (20, 8598),

Gene: StubbySaigey_27 Start: 7816, Stop: 8016, Start Num: 7

Candidate Starts for StubbySaigey_27:

(Start: 7 @7816 has 172 MA's), (12, 7852), (19, 7954), (20, 7978),

Gene: Suigeneris_54 Start: 48395, Stop: 48231, Start Num: 11

Candidate Starts for Suigeneris_54:

(Start: 11 @48395 has 11 MA's), (17, 48299), (20, 48263),

Gene: Tainan_33 Start: 10743, Stop: 10943, Start Num: 7

Candidate Starts for Tainan_33:

(Start: 7 @10743 has 172 MA's), (12, 10779), (19, 10881), (20, 10905),

Gene: Teardrop_27 Start: 8089, Stop: 8289, Start Num: 7

Candidate Starts for Teardrop_27:

(Start: 7 @8089 has 172 MA's), (9, 8110), (19, 8227), (20, 8251),

Gene: TinyTim_28 Start: 9173, Stop: 9373, Start Num: 7

Candidate Starts for TinyTim_28:

(Start: 7 @9173 has 172 MA's), (9, 9194), (19, 9311), (20, 9335),

Gene: Tonenili_32 Start: 10275, Stop: 10475, Start Num: 7

Candidate Starts for Tonenili_32:

(Start: 7 @10275 has 172 MA's), (19, 10413), (20, 10437),

Gene: Tortoise16_27 Start: 8624, Stop: 8824, Start Num: 7

Candidate Starts for Tortoise16_27:

(Start: 7 @8624 has 172 MA's), (9, 8645), (19, 8762), (20, 8786),

Gene: Trinitium_27 Start: 8065, Stop: 8265, Start Num: 7

Candidate Starts for Trinitium_27:

(Start: 7 @8065 has 172 MA's), (12, 8101), (19, 8203), (20, 8227),

Gene: Turret_26 Start: 7804, Stop: 8004, Start Num: 7

Candidate Starts for Turret_26:

(Start: 7 @7804 has 172 MA's), (12, 7840), (19, 7942), (20, 7966),

Gene: Tyke_30 Start: 10036, Stop: 10236, Start Num: 7

Candidate Starts for Tyke_30:

(Start: 7 @10036 has 172 MA's), (9, 10057), (19, 10174), (20, 10198),

Gene: ValleyTerrace_28 Start: 8628, Stop: 8828, Start Num: 7

Candidate Starts for ValleyTerrace_28:

(Start: 7 @8628 has 172 MA's), (19, 8766), (20, 8790),

Gene: Wally_27 Start: 8051, Stop: 8251, Start Num: 7

Candidate Starts for Wally_27:

(Start: 7 @8051 has 172 MA's), (9, 8072), (19, 8189), (20, 8213),

Gene: Willis_28 Start: 9068, Stop: 9268, Start Num: 7

Candidate Starts for Willis_28:

(Start: 7 @9068 has 172 MA's), (9, 9089), (19, 9206), (20, 9230),

Gene: Yassified_25 Start: 7828, Stop: 8028, Start Num: 7

Candidate Starts for Yassified_25:

(Start: 7 @7828 has 172 MA's), (12, 7864), (19, 7966), (20, 7990),

Gene: YemiJoy2021_29 Start: 9173, Stop: 9373, Start Num: 7

Candidate Starts for YemiJoy2021_29:

(Start: 7 @9173 has 172 MA's), (9, 9194), (19, 9311), (20, 9335),

Gene: YoungMoneyMata_28 Start: 8379, Stop: 8579, Start Num: 7

Candidate Starts for YoungMoneyMata_28:

(Start: 7 @8379 has 172 MA's), (19, 8517), (20, 8541),

Gene: Yucca_28 Start: 9095, Stop: 9295, Start Num: 7

Candidate Starts for Yucca_28:

(Start: 7 @9095 has 172 MA's), (9, 9116), (19, 9233), (20, 9257),

Gene: Zalkecks_30 Start: 9177, Stop: 9377, Start Num: 7

Candidate Starts for Zalkecks_30:

(Start: 7 @9177 has 172 MA's), (9, 9198), (19, 9315), (20, 9339),

Gene: Zeenon_30 Start: 9165, Stop: 9365, Start Num: 7

Candidate Starts for Zeenon_30:

(Start: 7 @9165 has 172 MA's), (9, 9186), (19, 9303), (20, 9327),

Gene: Zenteno07_57 Start: 47237, Stop: 47064, Start Num: 11

Candidate Starts for Zenteno07_57:

(1, 47972), (2, 47846), (3, 47804), (5, 47405), (Start: 11 @47237 has 11 MA's), (13, 47213), (19, 47129), (20, 47105), (21, 47099),

Gene: ZygoTaiga_28 Start: 9173, Stop: 9373, Start Num: 7

Candidate Starts for ZygoTaiga_28:

(Start: 7 @9173 has 172 MA's), (9, 9194), (19, 9311), (20, 9335),