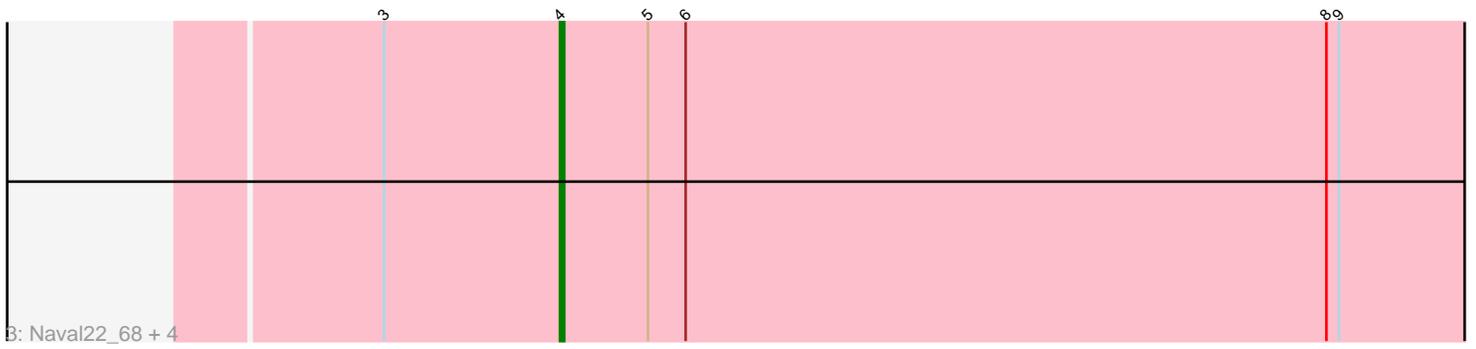
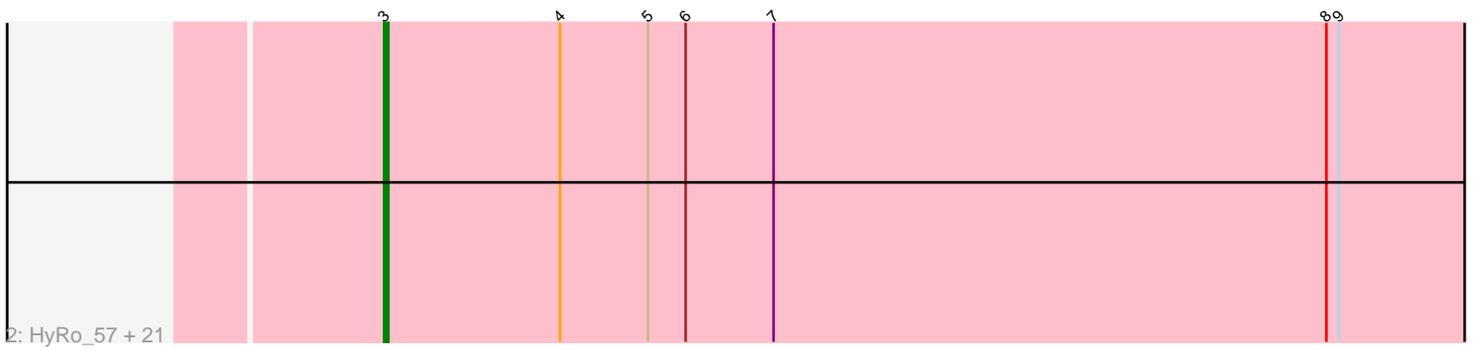


Pham 538



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 538 Report

This analysis was run 04/05/24 on database version 557.

Pham number 538 has 182 members, 15 are drafts.

Phages represented in each track:

- Track 1 : Gabriel_63, Cane17_51, Nappy_64, Jedediah_62, Daffodil_64, Jessibeth14_60, Bipolarisk_61, Littleton_61, Kamryn_61, Salacia_64, Nidhogg_62, Guwapp_60, FudgeTart_63, Delilah_62, CindyLou_62, Delylah_63, Blubba_51, Ading_61, Breeniome_63, ChaylaJr_57, BadAgartude_61, EggyFarm_67, Roots515_61, QBert_56, LolaVinca_65, InterFolia_70, Derek_62, Shaqnato_56, Jemmno_61, ShiaLabeouf_61, ValleyTerrace_61, BigCity_67, DrPhinkDaddy_61, Mangeria_65, Momo_60, YoungMoneyMata_61, Iota_56, IkeLoa_56, EmmaElysia_60, NoodleTree_62, Quasimodo_61, ChickenPhender_57, Basquiat_57, Lukilu_55, BananaFence_63, Jaygup_61, Chomp_59, McWolfish_60, SilverDipper_62, Audrick_63, Gizmo_64, Grasshills_67, Essence_60, MikeLiesIn_62, Pio_66, Wally_60, Grungle_53, Rahel_62, Tortoise16_59, DTDevon_62, Naija_60, Ewok_62, Cactojaque_56, Maby2021_62, Shelob_64, Mikro_60, Flabslab_58, Kboogie_62, Bangla1971_62, Phlegm_63, Pier_64, Darko_61, Ghost_61, ZygoTaiga_62, JPickles_59, McGee_60, Pleione_64, Bigswole_68, Babyland_60, Teardrop_61, Capablanca_63, BackyardAgain_59, RoMag_56, Ava3_63, CharlieB_59, EmToTheThree_65, Amataga_61, I3_64, Chargie21_57, Ngannou_56, Yucca_62, Izajani_63, Koguma_58, Adlitam_61, InigoMontoya_62, Shnickers_61, Atlantean_60, MoMoMixon_62, Erdmann_63, Rizal_60, Zeenon_64, Zalkecks_63, NedWong_63, BeanWater_55, Patter_61, LordLeafolot_67, LifeSavor_61, StubbySaigey_61, ArcherS7_61, Drazdys_61, Spec_59, NuevoMundo_67, Pivoine_60, Concombre_67, JulietS_56, PurduePete_61, SrishMeg2525_61, YemiJoy2021_62, Blackbrain_56, Caravan_58, Lee7_60, Specks_67, TinyTim_62, Fludd_61, Bread_62, LRRHood_58, Spud_62, ET08_53, Khaleesi_61, Napoleon13_59, Bonray_62, SmallFry_61, Shrimp_62, Norm_62, Janiyra_63, Catera_60, Burrough_62, FrayBell_68, Sauce_63, Megamind_61, Ronan_56, Willis_62, Latch_61, ParkTD_61, Dietrick_55, Phusco_61, Loanshark_62, Cali_59, Melpomini_57, Tyke_63, JustHall_57, Bxz1_62, Gamgam_61, Phox_60
- Track 2 : HyRo_57, Trinitium_57, FoxtrotP1_62, Stubby_57, Dandelion_67, ErnieJ_61, StephanieG_62, EasyJones_64, Turret_56, Alice_56, DirtMonster_58, LinStu_63, JayJay_65, Pinkcreek_54, Sebata_64, Colt_53, Astraea_63, Morizzled23_64, Rabinovish_61, Shifa_55, ScottMcG_60, Yassified_59
- Track 3 : Naval22_68, Sprinklers_58, Issimir_61, Asterius_59, Matsumoto_60
- Track 4 : Tonenili_72

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

The start number called the most often in the published annotations is 3, it was called in 166 of the 167 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Ading_61, Adlitam_61, Alice_56, Amataga_61, ArcherS7_61, Astraea_63, Atlantean_60, Audrick_63, Ava3_63, Babyland_60, BackyardAgain_59, BadAgartude_61, BananaFence_63, Bangla1971_62, Basquiat_57, BeanWater_55, BigCity_67, Bigswole_68, Bipolarisk_61, Blackbrain_56, Blubba_51, Bonray_62, Bread_62, Breeniome_63, Burrough_62, Bxz1_62, Cactojaque_56, Cali_59, Cane17_51, Capablanca_63, Caravan_58, Catera_60, Chargie21_57, CharlieB_59, ChaylaJr_57, ChickenPhender_57, Chomp_59, CindyLou_62, Colt_53, Concombre_67, DTDevon_62, Daffodil_64, Dandelion_67, Darko_61, Delilah_62, Delylah_63, Derek_62, Dietrick_55, DirtMonster_58, DrPhinkDaddy_61, Drazdys_61, ET08_53, EasyJones_64, EggyFarm_67, EmToTheThree_65, EmmaElysia_60, Erdmann_63, ErnieJ_61, Essence_60, Ewok_62, Flabslab_58, Fludd_61, FoxtrotP1_62, FrayBell_68, FudgeTart_63, Gabriel_63, Gamgam_61, Ghost_61, Gizmo_64, Grasshills_67, Grungle_53, Guwapp_60, HyRo_57, I3_64, IkeLoa_56, InigoMontoya_62, InterFolia_70, Iota_56, Izajani_63, JPickles_59, Janiyra_63, JayJay_65, Jaygup_61, Jediah_62, Jemmno_61, Jessibeth14_60, JulietS_56, JustHall_57, Kamryn_61, Kboogie_62, Khaleesi_61, Koguma_58, LRRHood_58, Latch_61, Lee7_60, LifeSavor_61, LinStu_63, Littleton_61, Loanshark_62, LolaVince_65, LordLeafolot_67, Lukilu_55, Maby2021_62, Mangeria_65, McGee_60, McWolfish_60, Megamind_61, Melpomini_57, MikeLiesIn_62, Mikro_60, MoMoMixon_62, Momo_60, Morizzled23_64, Naija_60, Napoleon13_59, Nappy_64, NedWong_63, Ngannou_56, Nidhogg_62, NoodleTree_62, Norm_62, NuevoMundo_67, ParkTD_61, Patter_61, Phlegm_63, Phox_60, Phusco_61, Pier_64, Pinkcreek_54, Pio_66, Pivoine_60, Pleione_64, PurduePete_61, QBert_56, Quasimodo_61, Rabinovich_61, Rahel_62, Rizal_60, RoMag_56, Ronan_56, Roots515_61, Salacia_64, Sauce_63, ScottMcG_60, Sebata_64, Shaqato_56, Shelob_64, ShiaLabeouf_61, Shifa_55, Shnickers_61, Shrimp_62, SilverDipper_62, SmallFry_61, Spec_59, Specks_67, Spud_62, SrishMeg2525_61, StephanieG_62, StubbySaigey_61, Stubby_57, Teardrop_61, TinyTim_62, Tonenili_72, Tortoise16_59, Trinitium_57, Turret_56, Tyke_63, ValleyTerrace_61, Wally_60, Willis_62, Yassified_59, YemiJoy2021_62, YoungMoneyMata_61, Yucca_62, Zalkecks_63, Zeenon_64, ZygoTaiga_62,

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

- Asterius_59, Issimir_61, Matsumoto_60, Naval22_68, Sprinklers_58,

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

-

Summary by start number:

Start 3:

- Found in 182 of 182 (100.0%) of genes in pham
- Manual Annotations of this start: 166 of 167
- Called 97.3% of time when present
- Phage (with cluster) where this start called: Ading_61 (C1), Adlitam_61 (C1), Alice_56 (C1), Amataga_61 (C1), ArcherS7_61 (C1), Astraea_63 (C1), Atlantean_60 (C1), Audrick_63 (C1), Ava3_63 (C1), Babyland_60 (C1), BackyardAgain_59 (C1), BadAgartude_61 (C1), BananaFence_63 (C1), Bangla1971_62 (C1), Basquiat_57

(C1), BeanWater_55 (C1), BigCity_67 (C1), Bigswole_68 (C1), Bipolarisk_61 (C1), Blackbrain_56 (C1), Blubba_51 (C1), Bonray_62 (C1), Bread_62 (C1), Breeniome_63 (C1), Burrough_62 (C1), Bxz1_62 (C1), Cactojaque_56 (C1), Cali_59 (C1), Cane17_51 (C1), Capablanca_63 (C1), Caravan_58 (C1), Catera_60 (C1), Chargie21_57 (C1), CharlieB_59 (C1), ChaylaJr_57 (C1), ChickenPhender_57 (C1), Chomp_59 (C1), CindyLou_62 (C1), Colt_53 (C1), Concombre_67 (C1), DTDevon_62 (C1), Daffodil_64 (C1), Dandelion_67 (C1), Darko_61 (C1), Delilah_62 (C1), Delylah_63 (C1), Derek_62 (C1), Dietrick_55 (C1), DirtMonster_58 (C1), DrPhinkDaddy_61 (C1), Drazdys_61 (C1), ET08_53 (C1), EasyJones_64 (C1), EggyFarm_67 (C1), EmToTheThree_65 (C1), EmmaElysia_60 (C1), Erdmann_63 (C1), ErnieJ_61 (C1), Essence_60 (C1), Ewok_62 (C1), Flabslab_58 (C1), Fludd_61 (C1), FoxtrotP1_62 (C1), FrayBell_68 (C1), FudgeTart_63 (C1), Gabriel_63 (C1), Gamgam_61 (C1), Ghost_61 (C1), Gizmo_64 (C1), Grasshills_67 (C1), Grungle_53 (C1), Guwapp_60 (C1), HyRo_57 (C1), I3_64 (C1), IkeLoa_56 (C1), InigoMontoya_62 (C1), InterFolia_70 (C1), Iota_56 (C1), Izajani_63 (C1), JPickles_59 (C1), Janiyra_63 (C1), JayJay_65 (C1), Jaygup_61 (C1), Jedediah_62 (C1), Jemmno_61 (C1), Jessibeth14_60 (C1), JulietS_56 (C1), JustHall_57 (C1), Kamryn_61 (C1), Kboogie_62 (C1), Khaleesi_61 (C1), Koguma_58 (C1), LRRHood_58 (C1), Latch_61 (C1), Lee7_60 (C1), LifeSavor_61 (C1), LinStu_63 (C1), Littleton_61 (C1), Loanshark_62 (C1), LolaVinca_65 (C1), LordLeafolot_67 (C1), Lukilu_55 (C1), Maby2021_62 (C1), Mangeria_65 (C1), McGee_60 (C1), McWolfish_60 (C1), Megamind_61 (C1), Melpomini_57 (C1), MikeLiesIn_62 (C1), Mikro_60 (C1), MoMoMixon_62 (C1), Momo_60 (C1), Morizzled23_64 (C1), Naija_60 (C1), Napoleon13_59 (C1), Nappy_64 (C1), NedWong_63 (C1), Ngannou_56 (C1), Nidhogg_62 (C1), NoodleTree_62 (C1), Norm_62 (C1), NuevoMundo_67 (C1), ParkTD_61 (C1), Patter_61 (C1), Phlegm_63 (C1), Phox_60 (C1), Phusco_61 (C1), Pier_64 (C1), Pinkcreek_54 (C1), Pio_66 (C1), Pivoine_60 (C1), Pleione_64 (C1), PurduePete_61 (C1), QBert_56 (C1), Quasimodo_61 (C1), Rabinovich_61 (C1), Rahel_62 (C1), Rizal_60 (C1), RoMag_56 (C1), Ronan_56 (C1), Roots515_61 (C1), Salacia_64 (C1), Sauce_63 (C1), ScottMcG_60 (C1), Sebata_64 (C1), Shaqnato_56 (C1), Shelob_64 (C1), ShiaLabeouf_61 (C1), Shifa_55 (C1), Shnickers_61 (C1), Shrimp_62 (C1), SilverDipper_62 (C1), SmallFry_61 (C1), Spec_59 (C1), Specks_67 (C1), Spud_62 (C1), SrishMeg2525_61 (C1), StephanieG_62 (C1), StubbySaigey_61 (C1), Stubby_57 (C1), Teardrop_61 (C1), TinyTim_62 (C1), Tonerili_72 (C1), Tortoise16_59 (C1), Trinitium_57 (C1), Turret_56 (C1), Tyke_63 (C1), ValleyTerrace_61 (C1), Wally_60 (C1), Willis_62 (C1), Yassified_59 (C1), YemiJoy2021_62 (C1), YoungMoneyMata_61 (C1), Yucca_62 (C1), Zalkecks_63 (C1), Zeenon_64 (C1), ZygoTaiga_62 (C1),

Start 4:

- Found in 182 of 182 (100.0%) of genes in pham
- Manual Annotations of this start: 1 of 167
- Called 2.7% of time when present
- Phage (with cluster) where this start called: Asterius_59 (C1), Issimir_61 (C1), Matsumoto_60 (C1), Naval22_68 (C1), Sprinklers_58 (C1),

Summary by clusters:

There is one cluster represented in this pham: C1

Info for manual annotations of cluster C1:

- Start number 3 was manually annotated 166 times for cluster C1.
- Start number 4 was manually annotated 1 time for cluster C1.

Gene Information:

Gene: Ading_61 Start: 19133, Stop: 19444, Start Num: 3

Candidate Starts for Ading_61:

(Start: 3 @19133 has 166 MA's), (Start: 4 @19175 has 1 MA's), (5, 19196), (6, 19205), (8, 19358), (9, 19361),

Gene: Adlitam_61 Start: 19150, Stop: 19461, Start Num: 3

Candidate Starts for Adlitam_61:

(Start: 3 @19150 has 166 MA's), (Start: 4 @19192 has 1 MA's), (5, 19213), (6, 19222), (8, 19375), (9, 19378),

Gene: Alice_56 Start: 19207, Stop: 19518, Start Num: 3

Candidate Starts for Alice_56:

(Start: 3 @19207 has 166 MA's), (Start: 4 @19249 has 1 MA's), (5, 19270), (6, 19279), (7, 19300), (8, 19432), (9, 19435),

Gene: Amataga_61 Start: 19154, Stop: 19465, Start Num: 3

Candidate Starts for Amataga_61:

(Start: 3 @19154 has 166 MA's), (Start: 4 @19196 has 1 MA's), (5, 19217), (6, 19226), (8, 19379), (9, 19382),

Gene: ArcherS7_61 Start: 19517, Stop: 19828, Start Num: 3

Candidate Starts for ArcherS7_61:

(Start: 3 @19517 has 166 MA's), (Start: 4 @19559 has 1 MA's), (5, 19580), (6, 19589), (8, 19742), (9, 19745),

Gene: Asterius_59 Start: 19533, Stop: 19802, Start Num: 4

Candidate Starts for Asterius_59:

(Start: 3 @19491 has 166 MA's), (Start: 4 @19533 has 1 MA's), (5, 19554), (6, 19563), (8, 19716), (9, 19719),

Gene: Astraea_63 Start: 20610, Stop: 20921, Start Num: 3

Candidate Starts for Astraea_63:

(Start: 3 @20610 has 166 MA's), (Start: 4 @20652 has 1 MA's), (5, 20673), (6, 20682), (7, 20703), (8, 20835), (9, 20838),

Gene: Atlantean_60 Start: 19154, Stop: 19465, Start Num: 3

Candidate Starts for Atlantean_60:

(Start: 3 @19154 has 166 MA's), (Start: 4 @19196 has 1 MA's), (5, 19217), (6, 19226), (8, 19379), (9, 19382),

Gene: Audrick_63 Start: 19133, Stop: 19444, Start Num: 3

Candidate Starts for Audrick_63:

(Start: 3 @19133 has 166 MA's), (Start: 4 @19175 has 1 MA's), (5, 19196), (6, 19205), (8, 19358), (9, 19361),

Gene: Ava3_63 Start: 20208, Stop: 20519, Start Num: 3

Candidate Starts for Ava3_63:

(Start: 3 @20208 has 166 MA's), (Start: 4 @20250 has 1 MA's), (5, 20271), (6, 20280), (8, 20433), (9, 20436),

Gene: Babyland_60 Start: 18592, Stop: 18903, Start Num: 3

Candidate Starts for Babyland_60:

(Start: 3 @18592 has 166 MA's), (Start: 4 @18634 has 1 MA's), (5, 18655), (6, 18664), (8, 18817), (9, 18820),

Gene: BackyardAgain_59 Start: 19085, Stop: 19396, Start Num: 3

Candidate Starts for BackyardAgain_59:

(Start: 3 @19085 has 166 MA's), (Start: 4 @19127 has 1 MA's), (5, 19148), (6, 19157), (8, 19310), (9, 19313),

Gene: BadAgartude_61 Start: 20951, Stop: 21262, Start Num: 3

Candidate Starts for BadAgartude_61:

(Start: 3 @20951 has 166 MA's), (Start: 4 @20993 has 1 MA's), (5, 21014), (6, 21023), (8, 21176), (9, 21179),

Gene: BananaFence_63 Start: 20092, Stop: 20403, Start Num: 3

Candidate Starts for BananaFence_63:

(Start: 3 @20092 has 166 MA's), (Start: 4 @20134 has 1 MA's), (5, 20155), (6, 20164), (8, 20317), (9, 20320),

Gene: Bangla1971_62 Start: 19647, Stop: 19958, Start Num: 3

Candidate Starts for Bangla1971_62:

(Start: 3 @19647 has 166 MA's), (Start: 4 @19689 has 1 MA's), (5, 19710), (6, 19719), (8, 19872), (9, 19875),

Gene: Basquiat_57 Start: 18578, Stop: 18889, Start Num: 3

Candidate Starts for Basquiat_57:

(Start: 3 @18578 has 166 MA's), (Start: 4 @18620 has 1 MA's), (5, 18641), (6, 18650), (8, 18803), (9, 18806),

Gene: BeanWater_55 Start: 19500, Stop: 19811, Start Num: 3

Candidate Starts for BeanWater_55:

(Start: 3 @19500 has 166 MA's), (Start: 4 @19542 has 1 MA's), (5, 19563), (6, 19572), (8, 19725), (9, 19728),

Gene: BigCity_67 Start: 21415, Stop: 21726, Start Num: 3

Candidate Starts for BigCity_67:

(Start: 3 @21415 has 166 MA's), (Start: 4 @21457 has 1 MA's), (5, 21478), (6, 21487), (8, 21640), (9, 21643),

Gene: Bigswole_68 Start: 22449, Stop: 22760, Start Num: 3

Candidate Starts for Bigswole_68:

(Start: 3 @22449 has 166 MA's), (Start: 4 @22491 has 1 MA's), (5, 22512), (6, 22521), (8, 22674), (9, 22677),

Gene: Bipolarisk_61 Start: 19919, Stop: 20230, Start Num: 3

Candidate Starts for Bipolarisk_61:

(Start: 3 @19919 has 166 MA's), (Start: 4 @19961 has 1 MA's), (5, 19982), (6, 19991), (8, 20144), (9, 20147),

Gene: Blackbrain_56 Start: 18395, Stop: 18706, Start Num: 3
Candidate Starts for Blackbrain_56:
(Start: 3 @18395 has 166 MA's), (Start: 4 @18437 has 1 MA's), (5, 18458), (6, 18467), (8, 18620), (9, 18623),

Gene: Blubba_51 Start: 17318, Stop: 17629, Start Num: 3
Candidate Starts for Blubba_51:
(Start: 3 @17318 has 166 MA's), (Start: 4 @17360 has 1 MA's), (5, 17381), (6, 17390), (8, 17543), (9, 17546),

Gene: Bonray_62 Start: 20196, Stop: 20507, Start Num: 3
Candidate Starts for Bonray_62:
(Start: 3 @20196 has 166 MA's), (Start: 4 @20238 has 1 MA's), (5, 20259), (6, 20268), (8, 20421), (9, 20424),

Gene: Bread_62 Start: 19889, Stop: 20200, Start Num: 3
Candidate Starts for Bread_62:
(Start: 3 @19889 has 166 MA's), (Start: 4 @19931 has 1 MA's), (5, 19952), (6, 19961), (8, 20114), (9, 20117),

Gene: Breeniome_63 Start: 19396, Stop: 19707, Start Num: 3
Candidate Starts for Breeniome_63:
(Start: 3 @19396 has 166 MA's), (Start: 4 @19438 has 1 MA's), (5, 19459), (6, 19468), (8, 19621), (9, 19624),

Gene: Burrough_62 Start: 19922, Stop: 20233, Start Num: 3
Candidate Starts for Burrough_62:
(Start: 3 @19922 has 166 MA's), (Start: 4 @19964 has 1 MA's), (5, 19985), (6, 19994), (8, 20147), (9, 20150),

Gene: Bxz1_62 Start: 20973, Stop: 21284, Start Num: 3
Candidate Starts for Bxz1_62:
(Start: 3 @20973 has 166 MA's), (Start: 4 @21015 has 1 MA's), (5, 21036), (6, 21045), (8, 21198), (9, 21201),

Gene: Cactojaque_56 Start: 18502, Stop: 18813, Start Num: 3
Candidate Starts for Cactojaque_56:
(Start: 3 @18502 has 166 MA's), (Start: 4 @18544 has 1 MA's), (5, 18565), (6, 18574), (8, 18727), (9, 18730),

Gene: Cali_59 Start: 20737, Stop: 21048, Start Num: 3
Candidate Starts for Cali_59:
(Start: 3 @20737 has 166 MA's), (Start: 4 @20779 has 1 MA's), (5, 20800), (6, 20809), (8, 20962), (9, 20965),

Gene: Cane17_51 Start: 17036, Stop: 17347, Start Num: 3
Candidate Starts for Cane17_51:
(Start: 3 @17036 has 166 MA's), (Start: 4 @17078 has 1 MA's), (5, 17099), (6, 17108), (8, 17261), (9, 17264),

Gene: Capablanca_63 Start: 20279, Stop: 20590, Start Num: 3
Candidate Starts for Capablanca_63:

(Start: 3 @20279 has 166 MA's), (Start: 4 @20321 has 1 MA's), (5, 20342), (6, 20351), (8, 20504), (9, 20507),

Gene: Caravan_58 Start: 19267, Stop: 19578, Start Num: 3

Candidate Starts for Caravan_58:

(Start: 3 @19267 has 166 MA's), (Start: 4 @19309 has 1 MA's), (5, 19330), (6, 19339), (8, 19492), (9, 19495),

Gene: Catera_60 Start: 19088, Stop: 19399, Start Num: 3

Candidate Starts for Catera_60:

(Start: 3 @19088 has 166 MA's), (Start: 4 @19130 has 1 MA's), (5, 19151), (6, 19160), (8, 19313), (9, 19316),

Gene: Chargie21_57 Start: 18578, Stop: 18889, Start Num: 3

Candidate Starts for Chargie21_57:

(Start: 3 @18578 has 166 MA's), (Start: 4 @18620 has 1 MA's), (5, 18641), (6, 18650), (8, 18803), (9, 18806),

Gene: CharlieB_59 Start: 18735, Stop: 19046, Start Num: 3

Candidate Starts for CharlieB_59:

(Start: 3 @18735 has 166 MA's), (Start: 4 @18777 has 1 MA's), (5, 18798), (6, 18807), (8, 18960), (9, 18963),

Gene: ChaylaJr_57 Start: 18667, Stop: 18978, Start Num: 3

Candidate Starts for ChaylaJr_57:

(Start: 3 @18667 has 166 MA's), (Start: 4 @18709 has 1 MA's), (5, 18730), (6, 18739), (8, 18892), (9, 18895),

Gene: ChickenPhender_57 Start: 18626, Stop: 18937, Start Num: 3

Candidate Starts for ChickenPhender_57:

(Start: 3 @18626 has 166 MA's), (Start: 4 @18668 has 1 MA's), (5, 18689), (6, 18698), (8, 18851), (9, 18854),

Gene: Chomp_59 Start: 19154, Stop: 19465, Start Num: 3

Candidate Starts for Chomp_59:

(Start: 3 @19154 has 166 MA's), (Start: 4 @19196 has 1 MA's), (5, 19217), (6, 19226), (8, 19379), (9, 19382),

Gene: CindyLou_62 Start: 19679, Stop: 19990, Start Num: 3

Candidate Starts for CindyLou_62:

(Start: 3 @19679 has 166 MA's), (Start: 4 @19721 has 1 MA's), (5, 19742), (6, 19751), (8, 19904), (9, 19907),

Gene: Colt_53 Start: 18022, Stop: 18333, Start Num: 3

Candidate Starts for Colt_53:

(Start: 3 @18022 has 166 MA's), (Start: 4 @18064 has 1 MA's), (5, 18085), (6, 18094), (7, 18115), (8, 18247), (9, 18250),

Gene: Concombres_67 Start: 21976, Stop: 22287, Start Num: 3

Candidate Starts for Concombres_67:

(Start: 3 @21976 has 166 MA's), (Start: 4 @22018 has 1 MA's), (5, 22039), (6, 22048), (8, 22201), (9, 22204),

Gene: DTDevon_62 Start: 20318, Stop: 20629, Start Num: 3

Candidate Starts for DTDevon_62:

(Start: 3 @20318 has 166 MA's), (Start: 4 @20360 has 1 MA's), (5, 20381), (6, 20390), (8, 20543), (9, 20546),

Gene: Daffodil_64 Start: 20208, Stop: 20519, Start Num: 3

Candidate Starts for Daffodil_64:

(Start: 3 @20208 has 166 MA's), (Start: 4 @20250 has 1 MA's), (5, 20271), (6, 20280), (8, 20433), (9, 20436),

Gene: Dandelion_67 Start: 21995, Stop: 22306, Start Num: 3

Candidate Starts for Dandelion_67:

(Start: 3 @21995 has 166 MA's), (Start: 4 @22037 has 1 MA's), (5, 22058), (6, 22067), (7, 22088), (8, 22220), (9, 22223),

Gene: Darko_61 Start: 20061, Stop: 20372, Start Num: 3

Candidate Starts for Darko_61:

(Start: 3 @20061 has 166 MA's), (Start: 4 @20103 has 1 MA's), (5, 20124), (6, 20133), (8, 20286), (9, 20289),

Gene: Delilah_62 Start: 20208, Stop: 20519, Start Num: 3

Candidate Starts for Delilah_62:

(Start: 3 @20208 has 166 MA's), (Start: 4 @20250 has 1 MA's), (5, 20271), (6, 20280), (8, 20433), (9, 20436),

Gene: Delylah_63 Start: 19986, Stop: 20297, Start Num: 3

Candidate Starts for Delylah_63:

(Start: 3 @19986 has 166 MA's), (Start: 4 @20028 has 1 MA's), (5, 20049), (6, 20058), (8, 20211), (9, 20214),

Gene: Derek_62 Start: 19485, Stop: 19796, Start Num: 3

Candidate Starts for Derek_62:

(Start: 3 @19485 has 166 MA's), (Start: 4 @19527 has 1 MA's), (5, 19548), (6, 19557), (8, 19710), (9, 19713),

Gene: Dietrick_55 Start: 18326, Stop: 18637, Start Num: 3

Candidate Starts for Dietrick_55:

(Start: 3 @18326 has 166 MA's), (Start: 4 @18368 has 1 MA's), (5, 18389), (6, 18398), (8, 18551), (9, 18554),

Gene: DirtMonster_58 Start: 19994, Stop: 20305, Start Num: 3

Candidate Starts for DirtMonster_58:

(Start: 3 @19994 has 166 MA's), (Start: 4 @20036 has 1 MA's), (5, 20057), (6, 20066), (7, 20087), (8, 20219), (9, 20222),

Gene: DrPhinkDaddy_61 Start: 20260, Stop: 20571, Start Num: 3

Candidate Starts for DrPhinkDaddy_61:

(Start: 3 @20260 has 166 MA's), (Start: 4 @20302 has 1 MA's), (5, 20323), (6, 20332), (8, 20485), (9, 20488),

Gene: Drazdys_61 Start: 19991, Stop: 20302, Start Num: 3

Candidate Starts for Drazdys_61:

(Start: 3 @19991 has 166 MA's), (Start: 4 @20033 has 1 MA's), (5, 20054), (6, 20063), (8, 20216), (9, 20219),

Gene: ET08_53 Start: 18603, Stop: 18914, Start Num: 3

Candidate Starts for ET08_53:

(Start: 3 @18603 has 166 MA's), (Start: 4 @18645 has 1 MA's), (5, 18666), (6, 18675), (8, 18828), (9, 18831),

Gene: EasyJones_64 Start: 20153, Stop: 20464, Start Num: 3

Candidate Starts for EasyJones_64:

(Start: 3 @20153 has 166 MA's), (Start: 4 @20195 has 1 MA's), (5, 20216), (6, 20225), (7, 20246), (8, 20378), (9, 20381),

Gene: EggyFarm_67 Start: 21415, Stop: 21726, Start Num: 3

Candidate Starts for EggyFarm_67:

(Start: 3 @21415 has 166 MA's), (Start: 4 @21457 has 1 MA's), (5, 21478), (6, 21487), (8, 21640), (9, 21643),

Gene: EmToTheThree_65 Start: 21622, Stop: 21933, Start Num: 3

Candidate Starts for EmToTheThree_65:

(Start: 3 @21622 has 166 MA's), (Start: 4 @21664 has 1 MA's), (5, 21685), (6, 21694), (8, 21847), (9, 21850),

Gene: EmmaElysia_60 Start: 18724, Stop: 19035, Start Num: 3

Candidate Starts for EmmaElysia_60:

(Start: 3 @18724 has 166 MA's), (Start: 4 @18766 has 1 MA's), (5, 18787), (6, 18796), (8, 18949), (9, 18952),

Gene: Erdmann_63 Start: 20208, Stop: 20519, Start Num: 3

Candidate Starts for Erdmann_63:

(Start: 3 @20208 has 166 MA's), (Start: 4 @20250 has 1 MA's), (5, 20271), (6, 20280), (8, 20433), (9, 20436),

Gene: ErnieJ_61 Start: 19497, Stop: 19808, Start Num: 3

Candidate Starts for ErnieJ_61:

(Start: 3 @19497 has 166 MA's), (Start: 4 @19539 has 1 MA's), (5, 19560), (6, 19569), (7, 19590), (8, 19722), (9, 19725),

Gene: Essence_60 Start: 19008, Stop: 19319, Start Num: 3

Candidate Starts for Essence_60:

(Start: 3 @19008 has 166 MA's), (Start: 4 @19050 has 1 MA's), (5, 19071), (6, 19080), (8, 19233), (9, 19236),

Gene: Ewok_62 Start: 20211, Stop: 20522, Start Num: 3

Candidate Starts for Ewok_62:

(Start: 3 @20211 has 166 MA's), (Start: 4 @20253 has 1 MA's), (5, 20274), (6, 20283), (8, 20436), (9, 20439),

Gene: Flabslab_58 Start: 19230, Stop: 19541, Start Num: 3

Candidate Starts for Flabslab_58:

(Start: 3 @19230 has 166 MA's), (Start: 4 @19272 has 1 MA's), (5, 19293), (6, 19302), (8, 19455), (9, 19458),

Gene: Fludd_61 Start: 19083, Stop: 19394, Start Num: 3

Candidate Starts for Fludd_61:

(Start: 3 @19083 has 166 MA's), (Start: 4 @19125 has 1 MA's), (5, 19146), (6, 19155), (8, 19308), (9, 19311),

Gene: FoxtrotP1_62 Start: 20536, Stop: 20847, Start Num: 3

Candidate Starts for FoxtrotP1_62:

(Start: 3 @20536 has 166 MA's), (Start: 4 @20578 has 1 MA's), (5, 20599), (6, 20608), (7, 20629), (8, 20761), (9, 20764),

Gene: FrayBell_68 Start: 21722, Stop: 22033, Start Num: 3

Candidate Starts for FrayBell_68:

(Start: 3 @21722 has 166 MA's), (Start: 4 @21764 has 1 MA's), (5, 21785), (6, 21794), (8, 21947), (9, 21950),

Gene: FudgeTart_63 Start: 20072, Stop: 20383, Start Num: 3

Candidate Starts for FudgeTart_63:

(Start: 3 @20072 has 166 MA's), (Start: 4 @20114 has 1 MA's), (5, 20135), (6, 20144), (8, 20297), (9, 20300),

Gene: Gabriel_63 Start: 19387, Stop: 19698, Start Num: 3

Candidate Starts for Gabriel_63:

(Start: 3 @19387 has 166 MA's), (Start: 4 @19429 has 1 MA's), (5, 19450), (6, 19459), (8, 19612), (9, 19615),

Gene: Gamgam_61 Start: 19154, Stop: 19465, Start Num: 3

Candidate Starts for Gamgam_61:

(Start: 3 @19154 has 166 MA's), (Start: 4 @19196 has 1 MA's), (5, 19217), (6, 19226), (8, 19379), (9, 19382),

Gene: Ghost_61 Start: 19154, Stop: 19465, Start Num: 3

Candidate Starts for Ghost_61:

(Start: 3 @19154 has 166 MA's), (Start: 4 @19196 has 1 MA's), (5, 19217), (6, 19226), (8, 19379), (9, 19382),

Gene: Gizmo_64 Start: 19891, Stop: 20202, Start Num: 3

Candidate Starts for Gizmo_64:

(Start: 3 @19891 has 166 MA's), (Start: 4 @19933 has 1 MA's), (5, 19954), (6, 19963), (8, 20116), (9, 20119),

Gene: Grasshills_67 Start: 21415, Stop: 21726, Start Num: 3

Candidate Starts for Grasshills_67:

(Start: 3 @21415 has 166 MA's), (Start: 4 @21457 has 1 MA's), (5, 21478), (6, 21487), (8, 21640), (9, 21643),

Gene: Grungle_53 Start: 17685, Stop: 17996, Start Num: 3

Candidate Starts for Grungle_53:

(Start: 3 @17685 has 166 MA's), (Start: 4 @17727 has 1 MA's), (5, 17748), (6, 17757), (8, 17910), (9, 17913),

Gene: Guwapp_60 Start: 19249, Stop: 19560, Start Num: 3

Candidate Starts for Guwapp_60:

(Start: 3 @19249 has 166 MA's), (Start: 4 @19291 has 1 MA's), (5, 19312), (6, 19321), (8, 19474), (9, 19477),

Gene: HyRo_57 Start: 19615, Stop: 19926, Start Num: 3

Candidate Starts for HyRo_57:

(Start: 3 @19615 has 166 MA's), (Start: 4 @19657 has 1 MA's), (5, 19678), (6, 19687), (7, 19708), (8, 19840), (9, 19843),

Gene: I3_64 Start: 19827, Stop: 20138, Start Num: 3

Candidate Starts for I3_64:

(Start: 3 @19827 has 166 MA's), (Start: 4 @19869 has 1 MA's), (5, 19890), (6, 19899), (8, 20052), (9, 20055),

Gene: IkeLoa_56 Start: 18893, Stop: 19204, Start Num: 3

Candidate Starts for IkeLoa_56:

(Start: 3 @18893 has 166 MA's), (Start: 4 @18935 has 1 MA's), (5, 18956), (6, 18965), (8, 19118), (9, 19121),

Gene: InigoMontoya_62 Start: 19115, Stop: 19426, Start Num: 3

Candidate Starts for InigoMontoya_62:

(Start: 3 @19115 has 166 MA's), (Start: 4 @19157 has 1 MA's), (5, 19178), (6, 19187), (8, 19340), (9, 19343),

Gene: InterFolia_70 Start: 22660, Stop: 22971, Start Num: 3

Candidate Starts for InterFolia_70:

(Start: 3 @22660 has 166 MA's), (Start: 4 @22702 has 1 MA's), (5, 22723), (6, 22732), (8, 22885), (9, 22888),

Gene: Iota_56 Start: 19191, Stop: 19502, Start Num: 3

Candidate Starts for Iota_56:

(Start: 3 @19191 has 166 MA's), (Start: 4 @19233 has 1 MA's), (5, 19254), (6, 19263), (8, 19416), (9, 19419),

Gene: Issimir_61 Start: 20193, Stop: 20462, Start Num: 4

Candidate Starts for Issimir_61:

(Start: 3 @20151 has 166 MA's), (Start: 4 @20193 has 1 MA's), (5, 20214), (6, 20223), (8, 20376), (9, 20379),

Gene: Izajani_63 Start: 20224, Stop: 20535, Start Num: 3

Candidate Starts for Izajani_63:

(Start: 3 @20224 has 166 MA's), (Start: 4 @20266 has 1 MA's), (5, 20287), (6, 20296), (8, 20449), (9, 20452),

Gene: JPickles_59 Start: 18348, Stop: 18659, Start Num: 3

Candidate Starts for JPickles_59:

(Start: 3 @18348 has 166 MA's), (Start: 4 @18390 has 1 MA's), (5, 18411), (6, 18420), (8, 18573), (9, 18576),

Gene: Janiyra_63 Start: 19913, Stop: 20224, Start Num: 3

Candidate Starts for Janiyra_63:

(Start: 3 @19913 has 166 MA's), (Start: 4 @19955 has 1 MA's), (5, 19976), (6, 19985), (8, 20138), (9, 20141),

Gene: JayJay_65 Start: 20704, Stop: 21015, Start Num: 3
Candidate Starts for JayJay_65:
(Start: 3 @20704 has 166 MA's), (Start: 4 @20746 has 1 MA's), (5, 20767), (6, 20776), (7, 20797), (8, 20929), (9, 20932),

Gene: Jaygup_61 Start: 19150, Stop: 19461, Start Num: 3
Candidate Starts for Jaygup_61:
(Start: 3 @19150 has 166 MA's), (Start: 4 @19192 has 1 MA's), (5, 19213), (6, 19222), (8, 19375), (9, 19378),

Gene: Jedediah_62 Start: 19651, Stop: 19962, Start Num: 3
Candidate Starts for Jedediah_62:
(Start: 3 @19651 has 166 MA's), (Start: 4 @19693 has 1 MA's), (5, 19714), (6, 19723), (8, 19876), (9, 19879),

Gene: Jemmno_61 Start: 19154, Stop: 19465, Start Num: 3
Candidate Starts for Jemmno_61:
(Start: 3 @19154 has 166 MA's), (Start: 4 @19196 has 1 MA's), (5, 19217), (6, 19226), (8, 19379), (9, 19382),

Gene: Jessibeth14_60 Start: 19612, Stop: 19923, Start Num: 3
Candidate Starts for Jessibeth14_60:
(Start: 3 @19612 has 166 MA's), (Start: 4 @19654 has 1 MA's), (5, 19675), (6, 19684), (8, 19837), (9, 19840),

Gene: JulietS_56 Start: 18113, Stop: 18424, Start Num: 3
Candidate Starts for JulietS_56:
(Start: 3 @18113 has 166 MA's), (Start: 4 @18155 has 1 MA's), (5, 18176), (6, 18185), (8, 18338), (9, 18341),

Gene: JustHall_57 Start: 19473, Stop: 19784, Start Num: 3
Candidate Starts for JustHall_57:
(Start: 3 @19473 has 166 MA's), (Start: 4 @19515 has 1 MA's), (5, 19536), (6, 19545), (8, 19698), (9, 19701),

Gene: Kamryn_61 Start: 19827, Stop: 20138, Start Num: 3
Candidate Starts for Kamryn_61:
(Start: 3 @19827 has 166 MA's), (Start: 4 @19869 has 1 MA's), (5, 19890), (6, 19899), (8, 20052), (9, 20055),

Gene: Kboogie_62 Start: 19137, Stop: 19448, Start Num: 3
Candidate Starts for Kboogie_62:
(Start: 3 @19137 has 166 MA's), (Start: 4 @19179 has 1 MA's), (5, 19200), (6, 19209), (8, 19362), (9, 19365),

Gene: Khaleesi_61 Start: 19955, Stop: 20266, Start Num: 3
Candidate Starts for Khaleesi_61:
(Start: 3 @19955 has 166 MA's), (Start: 4 @19997 has 1 MA's), (5, 20018), (6, 20027), (8, 20180), (9, 20183),

Gene: Koguma_58 Start: 18331, Stop: 18642, Start Num: 3
Candidate Starts for Koguma_58:

(Start: 3 @18331 has 166 MA's), (Start: 4 @18373 has 1 MA's), (5, 18394), (6, 18403), (8, 18556), (9, 18559),

Gene: LRRHood_58 Start: 20254, Stop: 20565, Start Num: 3

Candidate Starts for LRRHood_58:

(Start: 3 @20254 has 166 MA's), (Start: 4 @20296 has 1 MA's), (5, 20317), (6, 20326), (8, 20479), (9, 20482),

Gene: Latch_61 Start: 19154, Stop: 19465, Start Num: 3

Candidate Starts for Latch_61:

(Start: 3 @19154 has 166 MA's), (Start: 4 @19196 has 1 MA's), (5, 19217), (6, 19226), (8, 19379), (9, 19382),

Gene: Lee7_60 Start: 19886, Stop: 20197, Start Num: 3

Candidate Starts for Lee7_60:

(Start: 3 @19886 has 166 MA's), (Start: 4 @19928 has 1 MA's), (5, 19949), (6, 19958), (8, 20111), (9, 20114),

Gene: LifeSavor_61 Start: 18873, Stop: 19184, Start Num: 3

Candidate Starts for LifeSavor_61:

(Start: 3 @18873 has 166 MA's), (Start: 4 @18915 has 1 MA's), (5, 18936), (6, 18945), (8, 19098), (9, 19101),

Gene: LinStu_63 Start: 20961, Stop: 21272, Start Num: 3

Candidate Starts for LinStu_63:

(Start: 3 @20961 has 166 MA's), (Start: 4 @21003 has 1 MA's), (5, 21024), (6, 21033), (7, 21054), (8, 21186), (9, 21189),

Gene: Littleton_61 Start: 19154, Stop: 19465, Start Num: 3

Candidate Starts for Littleton_61:

(Start: 3 @19154 has 166 MA's), (Start: 4 @19196 has 1 MA's), (5, 19217), (6, 19226), (8, 19379), (9, 19382),

Gene: Loanshark_62 Start: 20208, Stop: 20519, Start Num: 3

Candidate Starts for Loanshark_62:

(Start: 3 @20208 has 166 MA's), (Start: 4 @20250 has 1 MA's), (5, 20271), (6, 20280), (8, 20433), (9, 20436),

Gene: LolaVinca_65 Start: 21369, Stop: 21680, Start Num: 3

Candidate Starts for LolaVinca_65:

(Start: 3 @21369 has 166 MA's), (Start: 4 @21411 has 1 MA's), (5, 21432), (6, 21441), (8, 21594), (9, 21597),

Gene: LordLeafolot_67 Start: 21721, Stop: 22032, Start Num: 3

Candidate Starts for LordLeafolot_67:

(Start: 3 @21721 has 166 MA's), (Start: 4 @21763 has 1 MA's), (5, 21784), (6, 21793), (8, 21946), (9, 21949),

Gene: Lukilu_55 Start: 19456, Stop: 19767, Start Num: 3

Candidate Starts for Lukilu_55:

(Start: 3 @19456 has 166 MA's), (Start: 4 @19498 has 1 MA's), (5, 19519), (6, 19528), (8, 19681), (9, 19684),

Gene: Maby2021_62 Start: 19889, Stop: 20200, Start Num: 3
Candidate Starts for Maby2021_62:
(Start: 3 @19889 has 166 MA's), (Start: 4 @19931 has 1 MA's), (5, 19952), (6, 19961), (8, 20114), (9, 20117),

Gene: Mangeria_65 Start: 21232, Stop: 21543, Start Num: 3
Candidate Starts for Mangeria_65:
(Start: 3 @21232 has 166 MA's), (Start: 4 @21274 has 1 MA's), (5, 21295), (6, 21304), (8, 21457), (9, 21460),

Gene: Matsumoto_60 Start: 19157, Stop: 19426, Start Num: 4
Candidate Starts for Matsumoto_60:
(Start: 3 @19115 has 166 MA's), (Start: 4 @19157 has 1 MA's), (5, 19178), (6, 19187), (8, 19340), (9, 19343),

Gene: McGee_60 Start: 18338, Stop: 18649, Start Num: 3
Candidate Starts for McGee_60:
(Start: 3 @18338 has 166 MA's), (Start: 4 @18380 has 1 MA's), (5, 18401), (6, 18410), (8, 18563), (9, 18566),

Gene: McWolfish_60 Start: 19636, Stop: 19947, Start Num: 3
Candidate Starts for McWolfish_60:
(Start: 3 @19636 has 166 MA's), (Start: 4 @19678 has 1 MA's), (5, 19699), (6, 19708), (8, 19861), (9, 19864),

Gene: Megamind_61 Start: 19874, Stop: 20185, Start Num: 3
Candidate Starts for Megamind_61:
(Start: 3 @19874 has 166 MA's), (Start: 4 @19916 has 1 MA's), (5, 19937), (6, 19946), (8, 20099), (9, 20102),

Gene: Melpomini_57 Start: 18565, Stop: 18876, Start Num: 3
Candidate Starts for Melpomini_57:
(Start: 3 @18565 has 166 MA's), (Start: 4 @18607 has 1 MA's), (5, 18628), (6, 18637), (8, 18790), (9, 18793),

Gene: MikeLiesIn_62 Start: 20221, Stop: 20532, Start Num: 3
Candidate Starts for MikeLiesIn_62:
(Start: 3 @20221 has 166 MA's), (Start: 4 @20263 has 1 MA's), (5, 20284), (6, 20293), (8, 20446), (9, 20449),

Gene: Mikro_60 Start: 20695, Stop: 21006, Start Num: 3
Candidate Starts for Mikro_60:
(Start: 3 @20695 has 166 MA's), (Start: 4 @20737 has 1 MA's), (5, 20758), (6, 20767), (8, 20920), (9, 20923),

Gene: MoMoMixon_62 Start: 20306, Stop: 20617, Start Num: 3
Candidate Starts for MoMoMixon_62:
(Start: 3 @20306 has 166 MA's), (Start: 4 @20348 has 1 MA's), (5, 20369), (6, 20378), (8, 20531), (9, 20534),

Gene: Momo_60 Start: 19154, Stop: 19465, Start Num: 3
Candidate Starts for Momo_60:

(Start: 3 @19154 has 166 MA's), (Start: 4 @19196 has 1 MA's), (5, 19217), (6, 19226), (8, 19379), (9, 19382),

Gene: Morizzled23_64 Start: 20180, Stop: 20491, Start Num: 3

Candidate Starts for Morizzled23_64:

(Start: 3 @20180 has 166 MA's), (Start: 4 @20222 has 1 MA's), (5, 20243), (6, 20252), (7, 20273), (8, 20405), (9, 20408),

Gene: Naija_60 Start: 19154, Stop: 19465, Start Num: 3

Candidate Starts for Naija_60:

(Start: 3 @19154 has 166 MA's), (Start: 4 @19196 has 1 MA's), (5, 19217), (6, 19226), (8, 19379), (9, 19382),

Gene: Napoleon13_59 Start: 18547, Stop: 18858, Start Num: 3

Candidate Starts for Napoleon13_59:

(Start: 3 @18547 has 166 MA's), (Start: 4 @18589 has 1 MA's), (5, 18610), (6, 18619), (8, 18772), (9, 18775),

Gene: Nappy_64 Start: 20509, Stop: 20820, Start Num: 3

Candidate Starts for Nappy_64:

(Start: 3 @20509 has 166 MA's), (Start: 4 @20551 has 1 MA's), (5, 20572), (6, 20581), (8, 20734), (9, 20737),

Gene: Naval22_68 Start: 21273, Stop: 21542, Start Num: 4

Candidate Starts for Naval22_68:

(Start: 3 @21231 has 166 MA's), (Start: 4 @21273 has 1 MA's), (5, 21294), (6, 21303), (8, 21456), (9, 21459),

Gene: NedWong_63 Start: 20208, Stop: 20519, Start Num: 3

Candidate Starts for NedWong_63:

(Start: 3 @20208 has 166 MA's), (Start: 4 @20250 has 1 MA's), (5, 20271), (6, 20280), (8, 20433), (9, 20436),

Gene: Ngannou_56 Start: 18136, Stop: 18447, Start Num: 3

Candidate Starts for Ngannou_56:

(Start: 3 @18136 has 166 MA's), (Start: 4 @18178 has 1 MA's), (5, 18199), (6, 18208), (8, 18361), (9, 18364),

Gene: Nidhogg_62 Start: 20062, Stop: 20373, Start Num: 3

Candidate Starts for Nidhogg_62:

(Start: 3 @20062 has 166 MA's), (Start: 4 @20104 has 1 MA's), (5, 20125), (6, 20134), (8, 20287), (9, 20290),

Gene: NoodleTree_62 Start: 20011, Stop: 20322, Start Num: 3

Candidate Starts for NoodleTree_62:

(Start: 3 @20011 has 166 MA's), (Start: 4 @20053 has 1 MA's), (5, 20074), (6, 20083), (8, 20236), (9, 20239),

Gene: Norm_62 Start: 20209, Stop: 20520, Start Num: 3

Candidate Starts for Norm_62:

(Start: 3 @20209 has 166 MA's), (Start: 4 @20251 has 1 MA's), (5, 20272), (6, 20281), (8, 20434), (9, 20437),

Gene: NuevoMundo_67 Start: 21210, Stop: 21521, Start Num: 3
Candidate Starts for NuevoMundo_67:
(Start: 3 @21210 has 166 MA's), (Start: 4 @21252 has 1 MA's), (5, 21273), (6, 21282), (8, 21435), (9, 21438),

Gene: ParkTD_61 Start: 20208, Stop: 20519, Start Num: 3
Candidate Starts for ParkTD_61:
(Start: 3 @20208 has 166 MA's), (Start: 4 @20250 has 1 MA's), (5, 20271), (6, 20280), (8, 20433), (9, 20436),

Gene: Patter_61 Start: 19171, Stop: 19482, Start Num: 3
Candidate Starts for Patter_61:
(Start: 3 @19171 has 166 MA's), (Start: 4 @19213 has 1 MA's), (5, 19234), (6, 19243), (8, 19396), (9, 19399),

Gene: Phlegm_63 Start: 19154, Stop: 19465, Start Num: 3
Candidate Starts for Phlegm_63:
(Start: 3 @19154 has 166 MA's), (Start: 4 @19196 has 1 MA's), (5, 19217), (6, 19226), (8, 19379), (9, 19382),

Gene: Phox_60 Start: 20936, Stop: 21247, Start Num: 3
Candidate Starts for Phox_60:
(Start: 3 @20936 has 166 MA's), (Start: 4 @20978 has 1 MA's), (5, 20999), (6, 21008), (8, 21161), (9, 21164),

Gene: Phusco_61 Start: 19964, Stop: 20275, Start Num: 3
Candidate Starts for Phusco_61:
(Start: 3 @19964 has 166 MA's), (Start: 4 @20006 has 1 MA's), (5, 20027), (6, 20036), (8, 20189), (9, 20192),

Gene: Pier_64 Start: 19908, Stop: 20219, Start Num: 3
Candidate Starts for Pier_64:
(Start: 3 @19908 has 166 MA's), (Start: 4 @19950 has 1 MA's), (5, 19971), (6, 19980), (8, 20133), (9, 20136),

Gene: Pinkcreek_54 Start: 18514, Stop: 18825, Start Num: 3
Candidate Starts for Pinkcreek_54:
(Start: 3 @18514 has 166 MA's), (Start: 4 @18556 has 1 MA's), (5, 18577), (6, 18586), (7, 18607), (8, 18739), (9, 18742),

Gene: Pio_66 Start: 21362, Stop: 21673, Start Num: 3
Candidate Starts for Pio_66:
(Start: 3 @21362 has 166 MA's), (Start: 4 @21404 has 1 MA's), (5, 21425), (6, 21434), (8, 21587), (9, 21590),

Gene: Pivoine_60 Start: 19154, Stop: 19465, Start Num: 3
Candidate Starts for Pivoine_60:
(Start: 3 @19154 has 166 MA's), (Start: 4 @19196 has 1 MA's), (5, 19217), (6, 19226), (8, 19379), (9, 19382),

Gene: Pleione_64 Start: 20207, Stop: 20518, Start Num: 3
Candidate Starts for Pleione_64:

(Start: 3 @20207 has 166 MA's), (Start: 4 @20249 has 1 MA's), (5, 20270), (6, 20279), (8, 20432), (9, 20435),

Gene: PurduePete_61 Start: 19932, Stop: 20243, Start Num: 3

Candidate Starts for PurduePete_61:

(Start: 3 @19932 has 166 MA's), (Start: 4 @19974 has 1 MA's), (5, 19995), (6, 20004), (8, 20157), (9, 20160),

Gene: QBert_56 Start: 19945, Stop: 20256, Start Num: 3

Candidate Starts for QBert_56:

(Start: 3 @19945 has 166 MA's), (Start: 4 @19987 has 1 MA's), (5, 20008), (6, 20017), (8, 20170), (9, 20173),

Gene: Quasimodo_61 Start: 20172, Stop: 20483, Start Num: 3

Candidate Starts for Quasimodo_61:

(Start: 3 @20172 has 166 MA's), (Start: 4 @20214 has 1 MA's), (5, 20235), (6, 20244), (8, 20397), (9, 20400),

Gene: Rabinovish_61 Start: 21232, Stop: 21543, Start Num: 3

Candidate Starts for Rabinovish_61:

(Start: 3 @21232 has 166 MA's), (Start: 4 @21274 has 1 MA's), (5, 21295), (6, 21304), (7, 21325), (8, 21457), (9, 21460),

Gene: Rahel_62 Start: 19523, Stop: 19834, Start Num: 3

Candidate Starts for Rahel_62:

(Start: 3 @19523 has 166 MA's), (Start: 4 @19565 has 1 MA's), (5, 19586), (6, 19595), (8, 19748), (9, 19751),

Gene: Rizal_60 Start: 19125, Stop: 19436, Start Num: 3

Candidate Starts for Rizal_60:

(Start: 3 @19125 has 166 MA's), (Start: 4 @19167 has 1 MA's), (5, 19188), (6, 19197), (8, 19350), (9, 19353),

Gene: RoMag_56 Start: 19127, Stop: 19438, Start Num: 3

Candidate Starts for RoMag_56:

(Start: 3 @19127 has 166 MA's), (Start: 4 @19169 has 1 MA's), (5, 19190), (6, 19199), (8, 19352), (9, 19355),

Gene: Ronan_56 Start: 17753, Stop: 18064, Start Num: 3

Candidate Starts for Ronan_56:

(Start: 3 @17753 has 166 MA's), (Start: 4 @17795 has 1 MA's), (5, 17816), (6, 17825), (8, 17978), (9, 17981),

Gene: Roots515_61 Start: 20009, Stop: 20320, Start Num: 3

Candidate Starts for Roots515_61:

(Start: 3 @20009 has 166 MA's), (Start: 4 @20051 has 1 MA's), (5, 20072), (6, 20081), (8, 20234), (9, 20237),

Gene: Salacia_64 Start: 20208, Stop: 20519, Start Num: 3

Candidate Starts for Salacia_64:

(Start: 3 @20208 has 166 MA's), (Start: 4 @20250 has 1 MA's), (5, 20271), (6, 20280), (8, 20433), (9, 20436),

Gene: Sauce_63 Start: 20154, Stop: 20465, Start Num: 3

Candidate Starts for Sauce_63:

(Start: 3 @20154 has 166 MA's), (Start: 4 @20196 has 1 MA's), (5, 20217), (6, 20226), (8, 20379), (9, 20382),

Gene: ScottMcG_60 Start: 19986, Stop: 20297, Start Num: 3

Candidate Starts for ScottMcG_60:

(Start: 3 @19986 has 166 MA's), (Start: 4 @20028 has 1 MA's), (5, 20049), (6, 20058), (7, 20079), (8, 20211), (9, 20214),

Gene: Sebata_64 Start: 21080, Stop: 21391, Start Num: 3

Candidate Starts for Sebata_64:

(Start: 3 @21080 has 166 MA's), (Start: 4 @21122 has 1 MA's), (5, 21143), (6, 21152), (7, 21173), (8, 21305), (9, 21308),

Gene: Shaqnato_56 Start: 18676, Stop: 18987, Start Num: 3

Candidate Starts for Shaqnato_56:

(Start: 3 @18676 has 166 MA's), (Start: 4 @18718 has 1 MA's), (5, 18739), (6, 18748), (8, 18901), (9, 18904),

Gene: Shelob_64 Start: 21200, Stop: 21511, Start Num: 3

Candidate Starts for Shelob_64:

(Start: 3 @21200 has 166 MA's), (Start: 4 @21242 has 1 MA's), (5, 21263), (6, 21272), (8, 21425), (9, 21428),

Gene: ShiaLabeouf_61 Start: 19591, Stop: 19902, Start Num: 3

Candidate Starts for ShiaLabeouf_61:

(Start: 3 @19591 has 166 MA's), (Start: 4 @19633 has 1 MA's), (5, 19654), (6, 19663), (8, 19816), (9, 19819),

Gene: Shifa_55 Start: 19061, Stop: 19372, Start Num: 3

Candidate Starts for Shifa_55:

(Start: 3 @19061 has 166 MA's), (Start: 4 @19103 has 1 MA's), (5, 19124), (6, 19133), (7, 19154), (8, 19286), (9, 19289),

Gene: Shnickers_61 Start: 19150, Stop: 19461, Start Num: 3

Candidate Starts for Shnickers_61:

(Start: 3 @19150 has 166 MA's), (Start: 4 @19192 has 1 MA's), (5, 19213), (6, 19222), (8, 19375), (9, 19378),

Gene: Shrimp_62 Start: 20212, Stop: 20523, Start Num: 3

Candidate Starts for Shrimp_62:

(Start: 3 @20212 has 166 MA's), (Start: 4 @20254 has 1 MA's), (5, 20275), (6, 20284), (8, 20437), (9, 20440),

Gene: SilverDipper_62 Start: 19154, Stop: 19465, Start Num: 3

Candidate Starts for SilverDipper_62:

(Start: 3 @19154 has 166 MA's), (Start: 4 @19196 has 1 MA's), (5, 19217), (6, 19226), (8, 19379), (9, 19382),

Gene: SmallFry_61 Start: 19150, Stop: 19461, Start Num: 3

Candidate Starts for SmallFry_61:

(Start: 3 @19150 has 166 MA's), (Start: 4 @19192 has 1 MA's), (5, 19213), (6, 19222), (8, 19375), (9, 19378),

Gene: Spec_59 Start: 19294, Stop: 19605, Start Num: 3

Candidate Starts for Spec_59:

(Start: 3 @19294 has 166 MA's), (Start: 4 @19336 has 1 MA's), (5, 19357), (6, 19366), (8, 19519), (9, 19522),

Gene: Specks_67 Start: 21683, Stop: 21994, Start Num: 3

Candidate Starts for Specks_67:

(Start: 3 @21683 has 166 MA's), (Start: 4 @21725 has 1 MA's), (5, 21746), (6, 21755), (8, 21908), (9, 21911),

Gene: Sprinklers_58 Start: 19168, Stop: 19437, Start Num: 4

Candidate Starts for Sprinklers_58:

(Start: 3 @19126 has 166 MA's), (Start: 4 @19168 has 1 MA's), (5, 19189), (6, 19198), (8, 19351), (9, 19354),

Gene: Spud_62 Start: 20523, Stop: 20834, Start Num: 3

Candidate Starts for Spud_62:

(Start: 3 @20523 has 166 MA's), (Start: 4 @20565 has 1 MA's), (5, 20586), (6, 20595), (8, 20748), (9, 20751),

Gene: SrishMeg2525_61 Start: 19919, Stop: 20230, Start Num: 3

Candidate Starts for SrishMeg2525_61:

(Start: 3 @19919 has 166 MA's), (Start: 4 @19961 has 1 MA's), (5, 19982), (6, 19991), (8, 20144), (9, 20147),

Gene: StephanieG_62 Start: 20526, Stop: 20837, Start Num: 3

Candidate Starts for StephanieG_62:

(Start: 3 @20526 has 166 MA's), (Start: 4 @20568 has 1 MA's), (5, 20589), (6, 20598), (7, 20619), (8, 20751), (9, 20754),

Gene: Stubby_57 Start: 19845, Stop: 20156, Start Num: 3

Candidate Starts for Stubby_57:

(Start: 3 @19845 has 166 MA's), (Start: 4 @19887 has 1 MA's), (5, 19908), (6, 19917), (7, 19938), (8, 20070), (9, 20073),

Gene: StubbySaigey_61 Start: 18848, Stop: 19159, Start Num: 3

Candidate Starts for StubbySaigey_61:

(Start: 3 @18848 has 166 MA's), (Start: 4 @18890 has 1 MA's), (5, 18911), (6, 18920), (8, 19073), (9, 19076),

Gene: Teardrop_61 Start: 19007, Stop: 19318, Start Num: 3

Candidate Starts for Teardrop_61:

(Start: 3 @19007 has 166 MA's), (Start: 4 @19049 has 1 MA's), (5, 19070), (6, 19079), (8, 19232), (9, 19235),

Gene: TinyTim_62 Start: 20208, Stop: 20519, Start Num: 3

Candidate Starts for TinyTim_62:

(Start: 3 @20208 has 166 MA's), (Start: 4 @20250 has 1 MA's), (5, 20271), (6, 20280), (8, 20433), (9, 20436),

Gene: Tonenili_72 Start: 22745, Stop: 23056, Start Num: 3
Candidate Starts for Tonenili_72:
(1, 22685), (2, 22688), (Start: 3 @22745 has 166 MA's), (Start: 4 @22787 has 1 MA's), (9, 22973),

Gene: Tortoise16_59 Start: 19658, Stop: 19969, Start Num: 3
Candidate Starts for Tortoise16_59:
(Start: 3 @19658 has 166 MA's), (Start: 4 @19700 has 1 MA's), (5, 19721), (6, 19730), (8, 19883), (9, 19886),

Gene: Trinitium_57 Start: 18611, Stop: 18922, Start Num: 3
Candidate Starts for Trinitium_57:
(Start: 3 @18611 has 166 MA's), (Start: 4 @18653 has 1 MA's), (5, 18674), (6, 18683), (7, 18704), (8, 18836), (9, 18839),

Gene: Turret_56 Start: 18335, Stop: 18646, Start Num: 3
Candidate Starts for Turret_56:
(Start: 3 @18335 has 166 MA's), (Start: 4 @18377 has 1 MA's), (5, 18398), (6, 18407), (7, 18428), (8, 18560), (9, 18563),

Gene: Tyke_63 Start: 20562, Stop: 20873, Start Num: 3
Candidate Starts for Tyke_63:
(Start: 3 @20562 has 166 MA's), (Start: 4 @20604 has 1 MA's), (5, 20625), (6, 20634), (8, 20787), (9, 20790),

Gene: ValleyTerrace_61 Start: 19154, Stop: 19465, Start Num: 3
Candidate Starts for ValleyTerrace_61:
(Start: 3 @19154 has 166 MA's), (Start: 4 @19196 has 1 MA's), (5, 19217), (6, 19226), (8, 19379), (9, 19382),

Gene: Wally_60 Start: 18763, Stop: 19074, Start Num: 3
Candidate Starts for Wally_60:
(Start: 3 @18763 has 166 MA's), (Start: 4 @18805 has 1 MA's), (5, 18826), (6, 18835), (8, 18988), (9, 18991),

Gene: Willis_62 Start: 20103, Stop: 20414, Start Num: 3
Candidate Starts for Willis_62:
(Start: 3 @20103 has 166 MA's), (Start: 4 @20145 has 1 MA's), (5, 20166), (6, 20175), (8, 20328), (9, 20331),

Gene: Yassified_59 Start: 19513, Stop: 19824, Start Num: 3
Candidate Starts for Yassified_59:
(Start: 3 @19513 has 166 MA's), (Start: 4 @19555 has 1 MA's), (5, 19576), (6, 19585), (7, 19606), (8, 19738), (9, 19741),

Gene: YemiJoy2021_62 Start: 19889, Stop: 20200, Start Num: 3
Candidate Starts for YemiJoy2021_62:
(Start: 3 @19889 has 166 MA's), (Start: 4 @19931 has 1 MA's), (5, 19952), (6, 19961), (8, 20114), (9, 20117),

Gene: YoungMoneyMata_61 Start: 18905, Stop: 19216, Start Num: 3
Candidate Starts for YoungMoneyMata_61:
(Start: 3 @18905 has 166 MA's), (Start: 4 @18947 has 1 MA's), (5, 18968), (6, 18977), (8, 19130), (9, 19133),

Gene: Yucca_62 Start: 20130, Stop: 20441, Start Num: 3

Candidate Starts for Yucca_62:

(Start: 3 @20130 has 166 MA's), (Start: 4 @20172 has 1 MA's), (5, 20193), (6, 20202), (8, 20355), (9, 20358),

Gene: Zalkecks_63 Start: 19893, Stop: 20204, Start Num: 3

Candidate Starts for Zalkecks_63:

(Start: 3 @19893 has 166 MA's), (Start: 4 @19935 has 1 MA's), (5, 19956), (6, 19965), (8, 20118), (9, 20121),

Gene: Zeenon_64 Start: 20195, Stop: 20506, Start Num: 3

Candidate Starts for Zeenon_64:

(Start: 3 @20195 has 166 MA's), (Start: 4 @20237 has 1 MA's), (5, 20258), (6, 20267), (8, 20420), (9, 20423),

Gene: ZygoTaiga_62 Start: 20209, Stop: 20520, Start Num: 3

Candidate Starts for ZygoTaiga_62:

(Start: 3 @20209 has 166 MA's), (Start: 4 @20251 has 1 MA's), (5, 20272), (6, 20281), (8, 20434), (9, 20437),