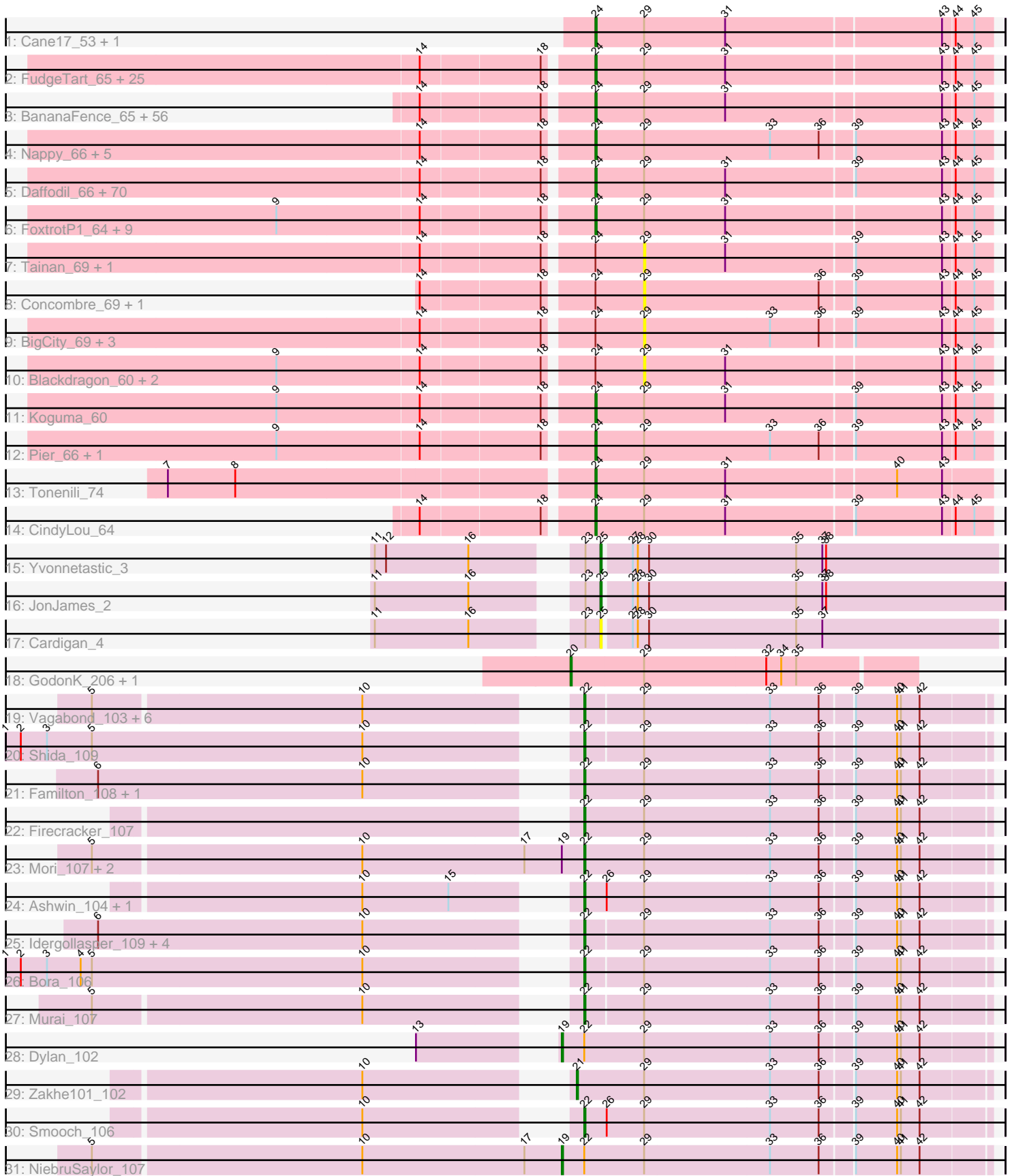


Pham 191047



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 191047 Report

This analysis was run 11/02/24 on database version 579.

Pham number 191047 has 220 members, 21 are drafts.

Phages represented in each track:

- Track 1 : Cane17_53, Blubba_54
- Track 2 : FudgeTart_65, Trinitium_59, HyRo_59, MoMoMixon_64, Stubby_59, Pinkcreek_56, Sebata_66, EasyJones_66, DirtMonster_60, Turret_58, Mangeria_67, ChickenPhender_59, Alice_58, LinStu_65, Issimir_64, Cactojaque_58, Kboogie_64, Colt_55, RoMag_58, EmToTheThree_67, InterFolia_72, Astraea_65, Blackbrain_58, ChaylaJr_59, Dietrick_57, JustHall_59
- Track 3 : BananaFence_65, Gabriel_65, Littleton_63, Guwapp_62, Derek_64, ValleyTerrace_63, Momo_62, YoungMoneyMata_63, Quasimodo_63, EmmaElysia_62, Jemmno_63, Jedediah_64, Breeniome_65, Jaygup_63, SilverDipper_64, Chomp_62, Audrick_65, Essence_62, JPickles_61, BackyardAgain_61, Pio_68, Naija_62, DTDevon_64, Phlegm_65, Ghost_63, McGee_62, Babyland_62, Teardrop_63, Amataga_63, Tortoise16_61, Adlitam_63, Shnickers_63, Atlantean_62, Patter_63, Rahel_64, LifeSavor_63, Matsumoto_62, Drazdys_63, ArcherS7_63, Pivoine_62, InigoMontoya_64, Spec_61, Ngannou_58, Specks_69, Bangla1971_64, SmallFry_63, Phusco_63, ShiaLabeouf_63, Ading_63, Burrough_64, Capablanca_65, Latch_63, Melpomini_59, Darko_63, Gamgam_63, Tyke_65, Bxz1_64
- Track 4 : Nappy_66, Dandelion_69, JigglyPuff_68, I3_66, IkeLoa_58, Bigswole_70
- Track 5 : Daffodil_66, Bipolarisk_63, Salacia_66, Kamryn_63, BadAgartude_63, Roots515_63, Willis_64, LolaVince_67, Shaqnato_58, DrPhinkDaddy_63, Iota_58, Erdmann_65, Fludd_63, Flabslab_60, Naval22_70, Cali_61, Lukilu_57, Basquiat_59, Megamind_63, McWolfish_62, LRRHood_60, Gizmo_66, Caravan_60, LordLeafolot_69, MikeLiesIn_64, Wally_62, Grungle_55, Napoleon13_61, Ewok_64, Delilah_64, Mikro_62, Maby2021_64, Shelob_66, ZygoTaiga_64, Izajani_65, Pleione_66, Ava3_65, Jessibeth14_62, Halldule_58, Chargie21_59, Delylah_65, Rizal_62, Zeenon_66, NedWong_65, BeanWater_57, Zalkecks_65, StubbySaigey_63, CharlieB_61, NoodleTree_64, Yucca_64, NuevoMundo_69, SrishMeg2525_63, PurduePete_63, FrayBell_70, Lee7_62, ET08_55, Spud_64, Janiyra_65, TinyTim_64, Khaleesi_63, Shrimp_64, Bonray_64, Norm_64, Ronan_58, Catera_62, Sprinklers_60, ParkTD_63, Loanshark_64, YemiJoy2021_64, Bread_64, Phox_62
- Track 6 : FoxtrotP1_64, Nidhogg_64, ErnieJ_63, StephanieG_64, Yassified_61, Shifa_57, Morizzled23_66, QBert_58, Rabinovish_63, Sauce_65
- Track 7 : Tainan_69, Asterius_61
- Track 8 : Concombre_69, Demodog_68
- Track 9 : BigCity_69, Grasshills_69, EggyFarm_69, JayJay_67
- Track 10 : Blackdragon_60, Domi_58, JulietS_58

- Track 11 : Koguma_60
- Track 12 : Pier_66, ScottMcG_62
- Track 13 : Tonenili_74
- Track 14 : CindyLou_64
- Track 15 : Yvonnetastic_3
- Track 16 : JonJames_2
- Track 17 : Cardigan_4
- Track 18 : GodonK_206, Phendrix_194
- Track 19 : Vagabond_103, Winget_107, Schuy_107, Catdawg_108, MadKillah_110, Alkhayr_103, FoulBall_106
- Track 20 : Shida_109
- Track 21 : Familton_108, Ryadel_111
- Track 22 : Firecracker_107
- Track 23 : Mori_107, Vorrps_107, Krili_109
- Track 24 : Ashwin_104, Wildflower_104
- Track 25 : Idergollasper_109, TelAviv_104, Blessica_105, SchoolBus_106, JangDynasty_103
- Track 26 : Bora_106
- Track 27 : Murai_107
- Track 28 : Dylan_102
- Track 29 : Zakhe101_102
- Track 30 : Smooch_106
- Track 31 : NiebruSaylor_107

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

The start number called the most often in the published annotations is 24, it was called in 170 of the 199 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Ading_63, Adlitam_63, Alice_58, Amataga_63, ArcherS7_63, Astraea_65, Atlantean_62, Audrick_65, Ava3_65, Babyland_62, BackyardAgain_61, BadAgartude_63, BananaFence_65, Bangla1971_64, Basquiat_59, BeanWater_57, Bigswole_70, Bipolarisk_63, Blackbrain_58, Blubba_54, Bonray_64, Bread_64, Breeniome_65, Burrough_64, Bxz1_64, Cactojaque_58, Cali_61, Cane17_53, Capablanca_65, Caravan_60, Catera_62, Chargie21_59, CharlieB_61, ChaylaJr_59, ChickenPhender_59, Chomp_62, CindyLou_64, Colt_55, DTDevon_64, Daffodil_66, Dandelion_69, Darko_63, Delilah_64, Delylah_65, Derek_64, Dietrick_57, DirtMonster_60, DrPhinkDaddy_63, Drazdys_63, ET08_55, EasyJones_66, EmToTheThree_67, EmmaElysia_62, Erdmann_65, ErnieJ_63, Essence_62, Ewok_64, Flabslab_60, Fludd_63, FoxtrotP1_64, FrayBell_70, FudgeTart_65, Gabriel_65, Gamgam_63, Ghost_63, Gizmo_66, Grungle_55, Guwapp_62, Halldule_58, HyRo_59, I3_66, IkeLoa_58, InigoMontoya_64, InterFolia_72, Iota_58, Issimir_64, Izajani_65, JPickles_61, Janiyra_65, Jaygup_63, Jediah_64, Jemmno_63, Jessibeth14_62, JigglyPuff_68, JustHall_59, Kamryn_63, Kboogie_64, Khaleesi_63, Koguma_60, LRRHood_60, Latch_63, Lee7_62, LifeSavor_63, LinStu_65, Littleton_63, Loanshark_64, LolaVinca_67, LordLeafolot_69, Lukilu_57, Maby2021_64, Mangeria_67, Matsumoto_62, McGee_62, McWolfish_62, Megamind_63, Melpomini_59, MikeLiesIn_64, Mikro_62, MoMoMixon_64, Momo_62, Morizzled23_66, Naija_62, Napoleon13_61, Nappy_66, Naval22_70, NedWong_65,

Ngannou_58, Nidhogg_64, NoodleTree_64, Norm_64, NuevoMundo_69, ParkTD_63, Patter_63, Phlegm_65, Phox_62, Phusco_63, Pier_66, Pinkcreek_56, Pio_68, Pivoine_62, Pleione_66, PurduePete_63, QBert_58, Quasimodo_63, Rabinovich_63, Rahel_64, Rizal_62, RoMag_58, Ronan_58, Roots515_63, Salacia_66, Sauce_65, ScottMcG_62, Sebata_66, Shaqato_58, Shelob_66, ShiaLabeouf_63, Shifa_57, Shnickers_63, Shrimp_64, SilverDipper_64, SmallFry_63, Spec_61, Specks_69, Sprinklers_60, Spud_64, SrishMeg2525_63, StephanieG_64, StubbySaigey_63, Stubby_59, Teardrop_63, TinyTim_64, Tonerili_74, Tortoise16_61, Trinitium_59, Turret_58, Tyke_65, ValleyTerrace_63, Wally_62, Willis_64, Yassified_61, YemiJoy2021_64, YoungMoneyMata_63, Yucca_64, Zalkecks_65, Zeenon_66, ZygoTaiga_64,

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

- Asterius_61, BigCity_69, Blackdragon_60, Concombre_69, Demodog_68, Domi_58, EggyFarm_69, Grasshills_69, JayJay_67, JulietS_58, Tainan_69,

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

- Alkhayr_103, Ashwin_104, Blessica_105, Bora_106, Cardigan_4, Catdawg_108, Dylan_102, Familton_108, Firecracker_107, FoulBall_106, GodonK_206, Idergollasper_109, JangDynasty_103, JonJames_2, Krili_109, MadKillah_110, Mori_107, Murai_107, NiebruSaylor_107, Phendrix_194, Ryadel_111, SchoolBus_106, Schuy_107, Shida_109, Smooch_106, TelAviv_104, Vagabond_103, Vorrps_107, Wildflower_104, Winget_107, Yvonnetastic_3, Zakhe101_102,

Summary by start number:

Start 19:

- Found in 5 of 220 (2.3%) of genes in pham
- Manual Annotations of this start: 2 of 199
- Called 40.0% of time when present
- Phage (with cluster) where this start called: Dylan_102 (O), NiebruSaylor_107 (O),

Start 20:

- Found in 2 of 220 (0.9%) of genes in pham
- Manual Annotations of this start: 2 of 199
- Called 100.0% of time when present
- Phage (with cluster) where this start called: GodonK_206 (DK), Phendrix_194 (DK),

Start 21:

- Found in 1 of 220 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 199
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Zakhe101_102 (O),

Start 22:

- Found in 26 of 220 (11.8%) of genes in pham
- Manual Annotations of this start: 22 of 199
- Called 92.3% of time when present
- Phage (with cluster) where this start called: Alkhayr_103 (O), Ashwin_104 (O), Blessica_105 (O), Bora_106 (O), Catdawg_108 (O), Familton_108 (O), Firecracker_107 (O), FoulBall_106 (O), Idergollasper_109 (O), JangDynasty_103 (O), Krili_109 (O), MadKillah_110 (O), Mori_107 (O), Murai_107 (O), Ryadel_111 (O),

SchoolBus_106 (O), Schuy_107 (O), Shida_109 (O), Smooch_106 (O), TelAviv_104 (O), Vagabond_103 (O), Vorrps_107 (O), Wildflower_104 (O), Winget_107 (O),

Start 24:

- Found in 188 of 220 (85.5%) of genes in pham
- Manual Annotations of this start: 170 of 199
- Called 94.1% of time when present
- Phage (with cluster) where this start called: Ading_63 (C1), Adlitam_63 (C1), Alice_58 (C1), Amataga_63 (C1), ArcherS7_63 (C1), Astraea_65 (C1), Atlantean_62 (C1), Audrick_65 (C1), Ava3_65 (C1), Babyland_62 (C1), BackyardAgain_61 (C1), BadAgartude_63 (C1), BananaFence_65 (C1), Bangla1971_64 (C1), Basquiat_59 (C1), BeanWater_57 (C1), Bigswole_70 (C1), Bipolarisk_63 (C1), Blackbrain_58 (C1), Blubba_54 (C1), Bonray_64 (C1), Bread_64 (C1), Breeniome_65 (C1), Burrough_64 (C1), Bxz1_64 (C1), Cactojaque_58 (C1), Cali_61 (C1), Cane17_53 (C1), Capablanca_65 (C1), Caravan_60 (C1), Catera_62 (C1), Chargie21_59 (C1), CharlieB_61 (C1), ChaylaJr_59 (C1), ChickenPhender_59 (C1), Chomp_62 (C1), CindyLou_64 (C1), Colt_55 (C1), DTDevon_64 (C1), Daffodil_66 (C1), Dandelion_69 (C1), Darko_63 (C1), Delilah_64 (C1), Delylah_65 (C1), Derek_64 (C1), Dietrick_57 (C1), DirtMonster_60 (C1), DrPhinkDaddy_63 (C1), Drazdys_63 (C1), ET08_55 (C1), EasyJones_66 (C1), EmToTheThree_67 (C1), EmmaElysia_62 (C1), Erdmann_65 (C1), ErnieJ_63 (C1), Essence_62 (C1), Ewok_64 (C1), Flabslab_60 (C1), Fludd_63 (C1), FoxtrotP1_64 (C1), FrayBell_70 (C1), FudgeTart_65 (C1), Gabriel_65 (C1), Gamgam_63 (C1), Ghost_63 (C1), Gizmo_66 (C1), Grungle_55 (C1), Guwapp_62 (C1), Halldule_58 (C1), HyRo_59 (C1), I3_66 (C1), IkeLoa_58 (C1), InigoMontoya_64 (C1), InterFolia_72 (C1), Iota_58 (C1), Issimir_64 (C1), Izajani_65 (C1), JPickles_61 (C1), Janiyra_65 (C1), Jaygup_63 (C1), Jediah_64 (C1), Jemmno_63 (C1), Jessibeth14_62 (C1), JigglyPuff_68 (C1), JustHall_59 (C1), Kamryn_63 (C1), Kboogie_64 (C1), Khaleesi_63 (C1), Koguma_60 (C1), LRRHood_60 (C1), Latch_63 (C1), Lee7_62 (C1), LifeSavor_63 (C1), LinStu_65 (C1), Littleton_63 (C1), Loanshark_64 (C1), LolaVinca_67 (C1), LordLeafolot_69 (C1), Lukilu_57 (C1), Maby2021_64 (C1), Mangeria_67 (C1), Matsumoto_62 (C1), McGee_62 (C1), McWolfish_62 (C1), Megamind_63 (C1), Melpomini_59 (C1), MikeLiesIn_64 (C1), Mikro_62 (C1), MoMoMixon_64 (C1), Momo_62 (C1), Morizzled23_66 (C1), Naija_62 (C1), Napoleon13_61 (C1), Nappy_66 (C1), Naval22_70 (C1), NedWong_65 (C1), Ngannou_58 (C1), Nidhogg_64 (C1), NoodleTree_64 (C1), Norm_64 (C1), NuevoMundo_69 (C1), ParkTD_63 (C1), Patter_63 (C1), Phlegm_65 (C1), Phox_62 (C1), Phusco_63 (C1), Pier_66 (C1), Pinkcreek_56 (C1), Pio_68 (C1), Pivoine_62 (C1), Pleione_66 (C1), PurduePete_63 (C1), QBert_58 (C1), Quasimodo_63 (C1), Rabinovish_63 (C1), Rahel_64 (C1), Rizal_62 (C1), RoMag_58 (C1), Ronan_58 (C1), Roots515_63 (C1), Salacia_66 (C1), Sauce_65 (C1), ScottMcG_62 (C1), Sebata_66 (C1), Shaqnato_58 (C1), Shelob_66 (C1), ShiaLabeouf_63 (C1), Shifa_57 (C1), Shnickers_63 (C1), Shrimp_64 (C1), SilverDipper_64 (C1), SmallFry_63 (C1), Spec_61 (C1), Specks_69 (C1), Sprinklers_60 (C1), Spud_64 (C1), SrishMeg2525_63 (C1), StephanieG_64 (C1), StubbySaigey_63 (C1), Stubby_59 (C1), Teardrop_63 (C1), TinyTim_64 (C1), Tonenili_74 (C1), Tortoise16_61 (C1), Trinitium_59 (C1), Turret_58 (C1), Tyke_65 (C1), ValleyTerrace_63 (C1), Wally_62 (C1), Willis_64 (C1), Yassified_61 (C1), YemiJoy2021_64 (C1), YoungMoneyMata_63 (C1), Yucca_64 (C1), Zalkecks_65 (C1), Zeenon_66 (C1), ZygoTaiga_64 (C1),

Start 25:

- Found in 3 of 220 (1.4%) of genes in pham
- Manual Annotations of this start: 2 of 199

- Called 100.0% of time when present
- Phage (with cluster) where this start called: Cardigan_4 (DD), JonJames_2 (DD), Yvonnestic_3 (DD),

Start 29:

- Found in 217 of 220 (98.6%) of genes in pham
- No Manual Annotations of this start.
- Called 5.1% of time when present
- Phage (with cluster) where this start called: Asterius_61 (C1), BigCity_69 (C1), Blackdragon_60 (C1), Concombre_69 (C1), Demodog_68 (C1), Domi_58 (C1), EggyFarm_69 (C1), Grasshills_69 (C1), JayJay_67 (C1), JulietS_58 (C1), Tainan_69 (C1),

Summary by clusters:

There are 4 clusters represented in this pham: C1, DD, O, DK,

Info for manual annotations of cluster C1:

- Start number 24 was manually annotated 170 times for cluster C1.

Info for manual annotations of cluster DD:

- Start number 25 was manually annotated 2 times for cluster DD.

Info for manual annotations of cluster DK:

- Start number 20 was manually annotated 2 times for cluster DK.

Info for manual annotations of cluster O:

- Start number 19 was manually annotated 2 times for cluster O.
- Start number 21 was manually annotated 1 time for cluster O.
- Start number 22 was manually annotated 22 times for cluster O.

Gene Information:

Gene: Ading_63 Start: 19644, Stop: 19952, Start Num: 24

Candidate Starts for Ading_63:

(14, 19518), (18, 19611), (Start: 24 @19644 has 170 MA's), (29, 19683), (31, 19746), (43, 19914), (44, 19923), (45, 19938),

Gene: Adlitam_63 Start: 19661, Stop: 19969, Start Num: 24

Candidate Starts for Adlitam_63:

(14, 19535), (18, 19628), (Start: 24 @19661 has 170 MA's), (29, 19700), (31, 19763), (43, 19931), (44, 19940), (45, 19955),

Gene: Alice_58 Start: 19718, Stop: 20026, Start Num: 24

Candidate Starts for Alice_58:

(14, 19592), (18, 19685), (Start: 24 @19718 has 170 MA's), (29, 19757), (31, 19820), (43, 19988), (44, 19997), (45, 20012),

Gene: Alkhayr_103 Start: 64105, Stop: 63794, Start Num: 22

Candidate Starts for Alkhayr_103:

(5, 64450), (10, 64240), (Start: 22 @64105 has 22 MA's), (29, 64060), (33, 63961), (36, 63922), (39, 63898), (40, 63865), (41, 63862), (42, 63847),

Gene: Amataga_63 Start: 19665, Stop: 19973, Start Num: 24

Candidate Starts for Amataga_63:

(14, 19539), (18, 19632), (Start: 24 @19665 has 170 MA's), (29, 19704), (31, 19767), (43, 19935), (44, 19944), (45, 19959),

Gene: ArcherS7_63 Start: 20028, Stop: 20336, Start Num: 24

Candidate Starts for ArcherS7_63:

(14, 19902), (18, 19995), (Start: 24 @20028 has 170 MA's), (29, 20067), (31, 20130), (43, 20298), (44, 20307), (45, 20322),

Gene: Ashwin_104 Start: 63342, Stop: 63028, Start Num: 22

Candidate Starts for Ashwin_104:

(10, 63477), (15, 63408), (Start: 22 @63342 has 22 MA's), (26, 63324), (29, 63294), (33, 63195), (36, 63156), (39, 63132), (40, 63099), (41, 63096), (42, 63081),

Gene: Asterius_61 Start: 20041, Stop: 20310, Start Num: 29

Candidate Starts for Asterius_61:

(14, 19876), (18, 19969), (Start: 24 @20002 has 170 MA's), (29, 20041), (31, 20104), (39, 20203), (43, 20272), (44, 20281), (45, 20296),

Gene: Astraea_65 Start: 21121, Stop: 21429, Start Num: 24

Candidate Starts for Astraea_65:

(14, 20995), (18, 21088), (Start: 24 @21121 has 170 MA's), (29, 21160), (31, 21223), (43, 21391), (44, 21400), (45, 21415),

Gene: Atlantean_62 Start: 19665, Stop: 19973, Start Num: 24

Candidate Starts for Atlantean_62:

(14, 19539), (18, 19632), (Start: 24 @19665 has 170 MA's), (29, 19704), (31, 19767), (43, 19935), (44, 19944), (45, 19959),

Gene: Audrick_65 Start: 19644, Stop: 19952, Start Num: 24

Candidate Starts for Audrick_65:

(14, 19518), (18, 19611), (Start: 24 @19644 has 170 MA's), (29, 19683), (31, 19746), (43, 19914), (44, 19923), (45, 19938),

Gene: Ava3_65 Start: 20719, Stop: 21027, Start Num: 24

Candidate Starts for Ava3_65:

(14, 20593), (18, 20686), (Start: 24 @20719 has 170 MA's), (29, 20758), (31, 20821), (39, 20920), (43, 20989), (44, 20998), (45, 21013),

Gene: Babyland_62 Start: 19103, Stop: 19411, Start Num: 24

Candidate Starts for Babyland_62:

(14, 18977), (18, 19070), (Start: 24 @19103 has 170 MA's), (29, 19142), (31, 19205), (43, 19373), (44, 19382), (45, 19397),

Gene: BackyardAgain_61 Start: 19596, Stop: 19904, Start Num: 24

Candidate Starts for BackyardAgain_61:

(14, 19470), (18, 19563), (Start: 24 @19596 has 170 MA's), (29, 19635), (31, 19698), (43, 19866), (44, 19875), (45, 19890),

Gene: BadAgartude_63 Start: 21462, Stop: 21770, Start Num: 24
Candidate Starts for BadAgartude_63:
(14, 21336), (18, 21429), (Start: 24 @21462 has 170 MA's), (29, 21501), (31, 21564), (39, 21663), (43, 21732), (44, 21741), (45, 21756),

Gene: BananaFence_65 Start: 20603, Stop: 20911, Start Num: 24
Candidate Starts for BananaFence_65:
(14, 20477), (18, 20570), (Start: 24 @20603 has 170 MA's), (29, 20642), (31, 20705), (43, 20873), (44, 20882), (45, 20897),

Gene: Bangla1971_64 Start: 20158, Stop: 20466, Start Num: 24
Candidate Starts for Bangla1971_64:
(14, 20032), (18, 20125), (Start: 24 @20158 has 170 MA's), (29, 20197), (31, 20260), (43, 20428), (44, 20437), (45, 20452),

Gene: Basquiat_59 Start: 19089, Stop: 19397, Start Num: 24
Candidate Starts for Basquiat_59:
(14, 18963), (18, 19056), (Start: 24 @19089 has 170 MA's), (29, 19128), (31, 19191), (39, 19290), (43, 19359), (44, 19368), (45, 19383),

Gene: BeanWater_57 Start: 20011, Stop: 20319, Start Num: 24
Candidate Starts for BeanWater_57:
(14, 19885), (18, 19978), (Start: 24 @20011 has 170 MA's), (29, 20050), (31, 20113), (39, 20212), (43, 20281), (44, 20290), (45, 20305),

Gene: BigCity_69 Start: 21965, Stop: 22234, Start Num: 29
Candidate Starts for BigCity_69:
(14, 21800), (18, 21893), (Start: 24 @21926 has 170 MA's), (29, 21965), (33, 22064), (36, 22103), (39, 22127), (43, 22196), (44, 22205), (45, 22220),

Gene: Bigswole_70 Start: 22960, Stop: 23268, Start Num: 24
Candidate Starts for Bigswole_70:
(14, 22834), (18, 22927), (Start: 24 @22960 has 170 MA's), (29, 22999), (33, 23098), (36, 23137), (39, 23161), (43, 23230), (44, 23239), (45, 23254),

Gene: Bipolarisk_63 Start: 20430, Stop: 20738, Start Num: 24
Candidate Starts for Bipolarisk_63:
(14, 20304), (18, 20397), (Start: 24 @20430 has 170 MA's), (29, 20469), (31, 20532), (39, 20631), (43, 20700), (44, 20709), (45, 20724),

Gene: Blackbrain_58 Start: 18906, Stop: 19214, Start Num: 24
Candidate Starts for Blackbrain_58:
(14, 18780), (18, 18873), (Start: 24 @18906 has 170 MA's), (29, 18945), (31, 19008), (43, 19176), (44, 19185), (45, 19200),

Gene: Blackdragon_60 Start: 19969, Stop: 20238, Start Num: 29
Candidate Starts for Blackdragon_60:
(9, 19693), (14, 19804), (18, 19897), (Start: 24 @19930 has 170 MA's), (29, 19969), (31, 20032), (43, 20200), (44, 20209), (45, 20224),

Gene: Blessica_105 Start: 64314, Stop: 64003, Start Num: 22
Candidate Starts for Blessica_105:

(6, 64659), (10, 64449), (Start: 22 @64314 has 22 MA's), (29, 64269), (33, 64170), (36, 64131), (39, 64107), (40, 64074), (41, 64071), (42, 64056),

Gene: Blubba_54 Start: 17829, Stop: 18137, Start Num: 24

Candidate Starts for Blubba_54:

(Start: 24 @17829 has 170 MA's), (29, 17868), (31, 17931), (43, 18099), (44, 18108), (45, 18123),

Gene: Bonray_64 Start: 20707, Stop: 21015, Start Num: 24

Candidate Starts for Bonray_64:

(14, 20581), (18, 20674), (Start: 24 @20707 has 170 MA's), (29, 20746), (31, 20809), (39, 20908), (43, 20977), (44, 20986), (45, 21001),

Gene: Bora_106 Start: 65156, Stop: 64845, Start Num: 22

Candidate Starts for Bora_106:

(1, 65576), (2, 65564), (3, 65543), (4, 65516), (5, 65507), (10, 65291), (Start: 22 @65156 has 22 MA's), (29, 65111), (33, 65012), (36, 64973), (39, 64949), (40, 64916), (41, 64913), (42, 64898),

Gene: Bread_64 Start: 20400, Stop: 20708, Start Num: 24

Candidate Starts for Bread_64:

(14, 20274), (18, 20367), (Start: 24 @20400 has 170 MA's), (29, 20439), (31, 20502), (39, 20601), (43, 20670), (44, 20679), (45, 20694),

Gene: Breeniome_65 Start: 19907, Stop: 20215, Start Num: 24

Candidate Starts for Breeniome_65:

(14, 19781), (18, 19874), (Start: 24 @19907 has 170 MA's), (29, 19946), (31, 20009), (43, 20177), (44, 20186), (45, 20201),

Gene: Burrough_64 Start: 20433, Stop: 20741, Start Num: 24

Candidate Starts for Burrough_64:

(14, 20307), (18, 20400), (Start: 24 @20433 has 170 MA's), (29, 20472), (31, 20535), (43, 20703), (44, 20712), (45, 20727),

Gene: Bxz1_64 Start: 21484, Stop: 21792, Start Num: 24

Candidate Starts for Bxz1_64:

(14, 21358), (18, 21451), (Start: 24 @21484 has 170 MA's), (29, 21523), (31, 21586), (43, 21754), (44, 21763), (45, 21778),

Gene: Cactojaque_58 Start: 19013, Stop: 19321, Start Num: 24

Candidate Starts for Cactojaque_58:

(14, 18887), (18, 18980), (Start: 24 @19013 has 170 MA's), (29, 19052), (31, 19115), (43, 19283), (44, 19292), (45, 19307),

Gene: Cali_61 Start: 21248, Stop: 21556, Start Num: 24

Candidate Starts for Cali_61:

(14, 21122), (18, 21215), (Start: 24 @21248 has 170 MA's), (29, 21287), (31, 21350), (39, 21449), (43, 21518), (44, 21527), (45, 21542),

Gene: Cane17_53 Start: 17547, Stop: 17855, Start Num: 24

Candidate Starts for Cane17_53:

(Start: 24 @17547 has 170 MA's), (29, 17586), (31, 17649), (43, 17817), (44, 17826), (45, 17841),

Gene: Capablanca_65 Start: 20790, Stop: 21098, Start Num: 24

Candidate Starts for Capablanca_65:

(14, 20664), (18, 20757), (Start: 24 @20790 has 170 MA's), (29, 20829), (31, 20892), (43, 21060), (44, 21069), (45, 21084),

Gene: Caravan_60 Start: 19778, Stop: 20086, Start Num: 24

Candidate Starts for Caravan_60:

(14, 19652), (18, 19745), (Start: 24 @19778 has 170 MA's), (29, 19817), (31, 19880), (39, 19979), (43, 20048), (44, 20057), (45, 20072),

Gene: Cardigan_4 Start: 1331, Stop: 1020, Start Num: 25

Candidate Starts for Cardigan_4:

(11, 1484), (16, 1409), (23, 1343), (Start: 25 @1331 has 2 MA's), (27, 1310), (28, 1307), (30, 1298), (35, 1181), (37, 1160),

Gene: Catdawg_108 Start: 65425, Stop: 65114, Start Num: 22

Candidate Starts for Catdawg_108:

(5, 65770), (10, 65560), (Start: 22 @65425 has 22 MA's), (29, 65380), (33, 65281), (36, 65242), (39, 65218), (40, 65185), (41, 65182), (42, 65167),

Gene: Catera_62 Start: 19599, Stop: 19907, Start Num: 24

Candidate Starts for Catera_62:

(14, 19473), (18, 19566), (Start: 24 @19599 has 170 MA's), (29, 19638), (31, 19701), (39, 19800), (43, 19869), (44, 19878), (45, 19893),

Gene: Chargie21_59 Start: 19089, Stop: 19397, Start Num: 24

Candidate Starts for Chargie21_59:

(14, 18963), (18, 19056), (Start: 24 @19089 has 170 MA's), (29, 19128), (31, 19191), (39, 19290), (43, 19359), (44, 19368), (45, 19383),

Gene: CharlieB_61 Start: 19246, Stop: 19554, Start Num: 24

Candidate Starts for CharlieB_61:

(14, 19120), (18, 19213), (Start: 24 @19246 has 170 MA's), (29, 19285), (31, 19348), (39, 19447), (43, 19516), (44, 19525), (45, 19540),

Gene: ChaylaJr_59 Start: 19178, Stop: 19486, Start Num: 24

Candidate Starts for ChaylaJr_59:

(14, 19052), (18, 19145), (Start: 24 @19178 has 170 MA's), (29, 19217), (31, 19280), (43, 19448), (44, 19457), (45, 19472),

Gene: ChickenPhender_59 Start: 19137, Stop: 19445, Start Num: 24

Candidate Starts for ChickenPhender_59:

(14, 19011), (18, 19104), (Start: 24 @19137 has 170 MA's), (29, 19176), (31, 19239), (43, 19407), (44, 19416), (45, 19431),

Gene: Chomp_62 Start: 19665, Stop: 19973, Start Num: 24

Candidate Starts for Chomp_62:

(14, 19539), (18, 19632), (Start: 24 @19665 has 170 MA's), (29, 19704), (31, 19767), (43, 19935), (44, 19944), (45, 19959),

Gene: CindyLou_64 Start: 20190, Stop: 20498, Start Num: 24

Candidate Starts for CindyLou_64:

(14, 20064), (18, 20157), (Start: 24 @20190 has 170 MA's), (29, 20229), (31, 20292), (39, 20391), (43, 20460), (44, 20469), (45, 20484),

Gene: Colt_55 Start: 18533, Stop: 18841, Start Num: 24

Candidate Starts for Colt_55:

(14, 18407), (18, 18500), (Start: 24 @18533 has 170 MA's), (29, 18572), (31, 18635), (43, 18803), (44, 18812), (45, 18827),

Gene: Concombres_69 Start: 22526, Stop: 22795, Start Num: 29

Candidate Starts for Concombres_69:

(14, 22361), (18, 22454), (Start: 24 @22487 has 170 MA's), (29, 22526), (36, 22664), (39, 22688), (43, 22757), (44, 22766), (45, 22781),

Gene: DTDevon_64 Start: 20829, Stop: 21137, Start Num: 24

Candidate Starts for DTDevon_64:

(14, 20703), (18, 20796), (Start: 24 @20829 has 170 MA's), (29, 20868), (31, 20931), (43, 21099), (44, 21108), (45, 21123),

Gene: Daffodil_66 Start: 20719, Stop: 21027, Start Num: 24

Candidate Starts for Daffodil_66:

(14, 20593), (18, 20686), (Start: 24 @20719 has 170 MA's), (29, 20758), (31, 20821), (39, 20920), (43, 20989), (44, 20998), (45, 21013),

Gene: Dandelion_69 Start: 22506, Stop: 22814, Start Num: 24

Candidate Starts for Dandelion_69:

(14, 22380), (18, 22473), (Start: 24 @22506 has 170 MA's), (29, 22545), (33, 22644), (36, 22683), (39, 22707), (43, 22776), (44, 22785), (45, 22800),

Gene: Darko_63 Start: 20572, Stop: 20880, Start Num: 24

Candidate Starts for Darko_63:

(14, 20446), (18, 20539), (Start: 24 @20572 has 170 MA's), (29, 20611), (31, 20674), (43, 20842), (44, 20851), (45, 20866),

Gene: Delilah_64 Start: 20719, Stop: 21027, Start Num: 24

Candidate Starts for Delilah_64:

(14, 20593), (18, 20686), (Start: 24 @20719 has 170 MA's), (29, 20758), (31, 20821), (39, 20920), (43, 20989), (44, 20998), (45, 21013),

Gene: Delylah_65 Start: 20497, Stop: 20805, Start Num: 24

Candidate Starts for Delylah_65:

(14, 20371), (18, 20464), (Start: 24 @20497 has 170 MA's), (29, 20536), (31, 20599), (39, 20698), (43, 20767), (44, 20776), (45, 20791),

Gene: Demodog_68 Start: 22526, Stop: 22795, Start Num: 29

Candidate Starts for Demodog_68:

(14, 22361), (18, 22454), (Start: 24 @22487 has 170 MA's), (29, 22526), (36, 22664), (39, 22688), (43, 22757), (44, 22766), (45, 22781),

Gene: Derek_64 Start: 19996, Stop: 20304, Start Num: 24

Candidate Starts for Derek_64:

(14, 19870), (18, 19963), (Start: 24 @19996 has 170 MA's), (29, 20035), (31, 20098), (43, 20266), (44, 20275), (45, 20290),

Gene: Dietrick_57 Start: 18837, Stop: 19145, Start Num: 24

Candidate Starts for Dietrick_57:

(14, 18711), (18, 18804), (Start: 24 @18837 has 170 MA's), (29, 18876), (31, 18939), (43, 19107), (44, 19116), (45, 19131),

Gene: DirtMonster_60 Start: 20505, Stop: 20813, Start Num: 24

Candidate Starts for DirtMonster_60:

(14, 20379), (18, 20472), (Start: 24 @20505 has 170 MA's), (29, 20544), (31, 20607), (43, 20775), (44, 20784), (45, 20799),

Gene: Domi_58 Start: 19646, Stop: 19915, Start Num: 29

Candidate Starts for Domi_58:

(9, 19370), (14, 19481), (18, 19574), (Start: 24 @19607 has 170 MA's), (29, 19646), (31, 19709), (43, 19877), (44, 19886), (45, 19901),

Gene: DrPhinkDaddy_63 Start: 20771, Stop: 21079, Start Num: 24

Candidate Starts for DrPhinkDaddy_63:

(14, 20645), (18, 20738), (Start: 24 @20771 has 170 MA's), (29, 20810), (31, 20873), (39, 20972), (43, 21041), (44, 21050), (45, 21065),

Gene: Drazdys_63 Start: 20502, Stop: 20810, Start Num: 24

Candidate Starts for Drazdys_63:

(14, 20376), (18, 20469), (Start: 24 @20502 has 170 MA's), (29, 20541), (31, 20604), (43, 20772), (44, 20781), (45, 20796),

Gene: Dylan_102 Start: 63094, Stop: 62762, Start Num: 19

Candidate Starts for Dylan_102:

(13, 63178), (Start: 19 @63094 has 2 MA's), (Start: 22 @63076 has 22 MA's), (29, 63028), (33, 62929), (36, 62890), (39, 62866), (40, 62833), (41, 62830), (42, 62815),

Gene: ET08_55 Start: 19114, Stop: 19422, Start Num: 24

Candidate Starts for ET08_55:

(14, 18988), (18, 19081), (Start: 24 @19114 has 170 MA's), (29, 19153), (31, 19216), (39, 19315), (43, 19384), (44, 19393), (45, 19408),

Gene: EasyJones_66 Start: 20664, Stop: 20972, Start Num: 24

Candidate Starts for EasyJones_66:

(14, 20538), (18, 20631), (Start: 24 @20664 has 170 MA's), (29, 20703), (31, 20766), (43, 20934), (44, 20943), (45, 20958),

Gene: EggyFarm_69 Start: 21965, Stop: 22234, Start Num: 29

Candidate Starts for EggyFarm_69:

(14, 21800), (18, 21893), (Start: 24 @21926 has 170 MA's), (29, 21965), (33, 22064), (36, 22103), (39, 22127), (43, 22196), (44, 22205), (45, 22220),

Gene: EmToTheThree_67 Start: 22133, Stop: 22441, Start Num: 24

Candidate Starts for EmToTheThree_67:

(14, 22007), (18, 22100), (Start: 24 @22133 has 170 MA's), (29, 22172), (31, 22235), (43, 22403), (44, 22412), (45, 22427),

Gene: EmmaElysia_62 Start: 19235, Stop: 19543, Start Num: 24

Candidate Starts for EmmaElysia_62:

(14, 19109), (18, 19202), (Start: 24 @19235 has 170 MA's), (29, 19274), (31, 19337), (43, 19505), (44, 19514), (45, 19529),

Gene: Erdmann_65 Start: 20719, Stop: 21027, Start Num: 24

Candidate Starts for Erdmann_65:

(14, 20593), (18, 20686), (Start: 24 @20719 has 170 MA's), (29, 20758), (31, 20821), (39, 20920), (43, 20989), (44, 20998), (45, 21013),

Gene: ErnieJ_63 Start: 20008, Stop: 20316, Start Num: 24

Candidate Starts for ErnieJ_63:

(9, 19771), (14, 19882), (18, 19975), (Start: 24 @20008 has 170 MA's), (29, 20047), (31, 20110), (43, 20278), (44, 20287), (45, 20302),

Gene: Essence_62 Start: 19519, Stop: 19827, Start Num: 24

Candidate Starts for Essence_62:

(14, 19393), (18, 19486), (Start: 24 @19519 has 170 MA's), (29, 19558), (31, 19621), (43, 19789), (44, 19798), (45, 19813),

Gene: Ewok_64 Start: 20722, Stop: 21030, Start Num: 24

Candidate Starts for Ewok_64:

(14, 20596), (18, 20689), (Start: 24 @20722 has 170 MA's), (29, 20761), (31, 20824), (39, 20923), (43, 20992), (44, 21001), (45, 21016),

Gene: Familton_108 Start: 64841, Stop: 64527, Start Num: 22

Candidate Starts for Familton_108:

(6, 65186), (10, 64976), (Start: 22 @64841 has 22 MA's), (29, 64793), (33, 64694), (36, 64655), (39, 64631), (40, 64598), (41, 64595), (42, 64580),

Gene: Firecracker_107 Start: 64710, Stop: 64396, Start Num: 22

Candidate Starts for Firecracker_107:

(Start: 22 @64710 has 22 MA's), (29, 64662), (33, 64563), (36, 64524), (39, 64500), (40, 64467), (41, 64464), (42, 64449),

Gene: Flabslab_60 Start: 19741, Stop: 20049, Start Num: 24

Candidate Starts for Flabslab_60:

(14, 19615), (18, 19708), (Start: 24 @19741 has 170 MA's), (29, 19780), (31, 19843), (39, 19942), (43, 20011), (44, 20020), (45, 20035),

Gene: Fludd_63 Start: 19594, Stop: 19902, Start Num: 24

Candidate Starts for Fludd_63:

(14, 19468), (18, 19561), (Start: 24 @19594 has 170 MA's), (29, 19633), (31, 19696), (39, 19795), (43, 19864), (44, 19873), (45, 19888),

Gene: FoulBall_106 Start: 64388, Stop: 64077, Start Num: 22

Candidate Starts for FoulBall_106:

(5, 64733), (10, 64523), (Start: 22 @64388 has 22 MA's), (29, 64343), (33, 64244), (36, 64205), (39, 64181), (40, 64148), (41, 64145), (42, 64130),

Gene: FoxtrotP1_64 Start: 21047, Stop: 21355, Start Num: 24

Candidate Starts for FoxtrotP1_64:

(9, 20810), (14, 20921), (18, 21014), (Start: 24 @21047 has 170 MA's), (29, 21086), (31, 21149), (43, 21317), (44, 21326), (45, 21341),

Gene: FrayBell_70 Start: 22233, Stop: 22541, Start Num: 24

Candidate Starts for FrayBell_70:

(14, 22107), (18, 22200), (Start: 24 @22233 has 170 MA's), (29, 22272), (31, 22335), (39, 22434), (43, 22503), (44, 22512), (45, 22527),

Gene: FudgeTart_65 Start: 20583, Stop: 20891, Start Num: 24

Candidate Starts for FudgeTart_65:

(14, 20457), (18, 20550), (Start: 24 @20583 has 170 MA's), (29, 20622), (31, 20685), (43, 20853), (44, 20862), (45, 20877),

Gene: Gabriel_65 Start: 19898, Stop: 20206, Start Num: 24

Candidate Starts for Gabriel_65:

(14, 19772), (18, 19865), (Start: 24 @19898 has 170 MA's), (29, 19937), (31, 20000), (43, 20168), (44, 20177), (45, 20192),

Gene: Gamgam_63 Start: 19665, Stop: 19973, Start Num: 24

Candidate Starts for Gamgam_63:

(14, 19539), (18, 19632), (Start: 24 @19665 has 170 MA's), (29, 19704), (31, 19767), (43, 19935), (44, 19944), (45, 19959),

Gene: Ghost_63 Start: 19665, Stop: 19973, Start Num: 24

Candidate Starts for Ghost_63:

(14, 19539), (18, 19632), (Start: 24 @19665 has 170 MA's), (29, 19704), (31, 19767), (43, 19935), (44, 19944), (45, 19959),

Gene: Gizmo_66 Start: 20402, Stop: 20710, Start Num: 24

Candidate Starts for Gizmo_66:

(14, 20276), (18, 20369), (Start: 24 @20402 has 170 MA's), (29, 20441), (31, 20504), (39, 20603), (43, 20672), (44, 20681), (45, 20696),

Gene: GodonK_206 Start: 106262, Stop: 105993, Start Num: 20

Candidate Starts for GodonK_206:

(Start: 20 @106262 has 2 MA's), (29, 106205), (32, 106109), (34, 106097), (35, 106085),

Gene: Grasshills_69 Start: 21965, Stop: 22234, Start Num: 29

Candidate Starts for Grasshills_69:

(14, 21800), (18, 21893), (Start: 24 @21926 has 170 MA's), (29, 21965), (33, 22064), (36, 22103), (39, 22127), (43, 22196), (44, 22205), (45, 22220),

Gene: Grungle_55 Start: 18196, Stop: 18504, Start Num: 24

Candidate Starts for Grungle_55:

(14, 18070), (18, 18163), (Start: 24 @18196 has 170 MA's), (29, 18235), (31, 18298), (39, 18397), (43, 18466), (44, 18475), (45, 18490),

Gene: Guwapp_62 Start: 19760, Stop: 20068, Start Num: 24

Candidate Starts for Guwapp_62:

(14, 19634), (18, 19727), (Start: 24 @19760 has 170 MA's), (29, 19799), (31, 19862), (43, 20030), (44, 20039), (45, 20054),

Gene: Halldule_58 Start: 18773, Stop: 19081, Start Num: 24

Candidate Starts for Halldule_58:

(14, 18647), (18, 18740), (Start: 24 @18773 has 170 MA's), (29, 18812), (31, 18875), (39, 18974), (43, 19043), (44, 19052), (45, 19067),

Gene: HyRo_59 Start: 20126, Stop: 20434, Start Num: 24

Candidate Starts for HyRo_59:

(14, 20000), (18, 20093), (Start: 24 @20126 has 170 MA's), (29, 20165), (31, 20228), (43, 20396), (44, 20405), (45, 20420),

Gene: I3_66 Start: 20338, Stop: 20646, Start Num: 24

Candidate Starts for I3_66:

(14, 20212), (18, 20305), (Start: 24 @20338 has 170 MA's), (29, 20377), (33, 20476), (36, 20515), (39, 20539), (43, 20608), (44, 20617), (45, 20632),

Gene: Idergollasper_109 Start: 65389, Stop: 65078, Start Num: 22

Candidate Starts for Idergollasper_109:

(6, 65734), (10, 65524), (Start: 22 @65389 has 22 MA's), (29, 65344), (33, 65245), (36, 65206), (39, 65182), (40, 65149), (41, 65146), (42, 65131),

Gene: IkeLoa_58 Start: 19404, Stop: 19712, Start Num: 24

Candidate Starts for IkeLoa_58:

(14, 19278), (18, 19371), (Start: 24 @19404 has 170 MA's), (29, 19443), (33, 19542), (36, 19581), (39, 19605), (43, 19674), (44, 19683), (45, 19698),

Gene: InigoMontoya_64 Start: 19626, Stop: 19934, Start Num: 24

Candidate Starts for InigoMontoya_64:

(14, 19500), (18, 19593), (Start: 24 @19626 has 170 MA's), (29, 19665), (31, 19728), (43, 19896), (44, 19905), (45, 19920),

Gene: InterFolia_72 Start: 23171, Stop: 23479, Start Num: 24

Candidate Starts for InterFolia_72:

(14, 23045), (18, 23138), (Start: 24 @23171 has 170 MA's), (29, 23210), (31, 23273), (43, 23441), (44, 23450), (45, 23465),

Gene: Iota_58 Start: 19702, Stop: 20010, Start Num: 24

Candidate Starts for Iota_58:

(14, 19576), (18, 19669), (Start: 24 @19702 has 170 MA's), (29, 19741), (31, 19804), (39, 19903), (43, 19972), (44, 19981), (45, 19996),

Gene: Issimir_64 Start: 20662, Stop: 20970, Start Num: 24

Candidate Starts for Issimir_64:

(14, 20536), (18, 20629), (Start: 24 @20662 has 170 MA's), (29, 20701), (31, 20764), (43, 20932), (44, 20941), (45, 20956),

Gene: Izajani_65 Start: 20735, Stop: 21043, Start Num: 24

Candidate Starts for Izajani_65:

(14, 20609), (18, 20702), (Start: 24 @20735 has 170 MA's), (29, 20774), (31, 20837), (39, 20936), (43, 21005), (44, 21014), (45, 21029),

Gene: JPickles_61 Start: 18859, Stop: 19167, Start Num: 24

Candidate Starts for JPickles_61:

(14, 18733), (18, 18826), (Start: 24 @18859 has 170 MA's), (29, 18898), (31, 18961), (43, 19129), (44, 19138), (45, 19153),

Gene: JangDynasty_103 Start: 63739, Stop: 63428, Start Num: 22

Candidate Starts for JangDynasty_103:

(6, 64084), (10, 63874), (Start: 22 @63739 has 22 MA's), (29, 63694), (33, 63595), (36, 63556), (39, 63532), (40, 63499), (41, 63496), (42, 63481),

Gene: Janiyra_65 Start: 20424, Stop: 20732, Start Num: 24

Candidate Starts for Janiyra_65:

(14, 20298), (18, 20391), (Start: 24 @20424 has 170 MA's), (29, 20463), (31, 20526), (39, 20625), (43, 20694), (44, 20703), (45, 20718),

Gene: JayJay_67 Start: 21254, Stop: 21523, Start Num: 29

Candidate Starts for JayJay_67:

(14, 21089), (18, 21182), (Start: 24 @21215 has 170 MA's), (29, 21254), (33, 21353), (36, 21392), (39, 21416), (43, 21485), (44, 21494), (45, 21509),

Gene: Jaygup_63 Start: 19661, Stop: 19969, Start Num: 24

Candidate Starts for Jaygup_63:

(14, 19535), (18, 19628), (Start: 24 @19661 has 170 MA's), (29, 19700), (31, 19763), (43, 19931), (44, 19940), (45, 19955),

Gene: Jedediah_64 Start: 20162, Stop: 20470, Start Num: 24

Candidate Starts for Jedediah_64:

(14, 20036), (18, 20129), (Start: 24 @20162 has 170 MA's), (29, 20201), (31, 20264), (43, 20432), (44, 20441), (45, 20456),

Gene: Jemmno_63 Start: 19665, Stop: 19973, Start Num: 24

Candidate Starts for Jemmno_63:

(14, 19539), (18, 19632), (Start: 24 @19665 has 170 MA's), (29, 19704), (31, 19767), (43, 19935), (44, 19944), (45, 19959),

Gene: Jessibeth14_62 Start: 20123, Stop: 20431, Start Num: 24

Candidate Starts for Jessibeth14_62:

(14, 19997), (18, 20090), (Start: 24 @20123 has 170 MA's), (29, 20162), (31, 20225), (39, 20324), (43, 20393), (44, 20402), (45, 20417),

Gene: JigglyPuff_68 Start: 21880, Stop: 22188, Start Num: 24

Candidate Starts for JigglyPuff_68:

(14, 21754), (18, 21847), (Start: 24 @21880 has 170 MA's), (29, 21919), (33, 22018), (36, 22057), (39, 22081), (43, 22150), (44, 22159), (45, 22174),

Gene: JonJames_2 Start: 1485, Stop: 1168, Start Num: 25

Candidate Starts for JonJames_2:

(11, 1638), (16, 1563), (23, 1497), (Start: 25 @1485 has 2 MA's), (27, 1464), (28, 1461), (30, 1452), (35, 1335), (37, 1314), (38, 1311),

Gene: JulietS_58 Start: 18663, Stop: 18932, Start Num: 29

Candidate Starts for JulietS_58:

(9, 18387), (14, 18498), (18, 18591), (Start: 24 @18624 has 170 MA's), (29, 18663), (31, 18726), (43, 18894), (44, 18903), (45, 18918),

Gene: JustHall_59 Start: 19984, Stop: 20292, Start Num: 24

Candidate Starts for JustHall_59:

(14, 19858), (18, 19951), (Start: 24 @19984 has 170 MA's), (29, 20023), (31, 20086), (43, 20254), (44, 20263), (45, 20278),

Gene: Kamryn_63 Start: 20338, Stop: 20646, Start Num: 24

Candidate Starts for Kamryn_63:

(14, 20212), (18, 20305), (Start: 24 @20338 has 170 MA's), (29, 20377), (31, 20440), (39, 20539), (43, 20608), (44, 20617), (45, 20632),

Gene: Kboogie_64 Start: 19648, Stop: 19956, Start Num: 24

Candidate Starts for Kboogie_64:

(14, 19522), (18, 19615), (Start: 24 @19648 has 170 MA's), (29, 19687), (31, 19750), (43, 19918), (44, 19927), (45, 19942),

Gene: Khaleesi_63 Start: 20466, Stop: 20774, Start Num: 24

Candidate Starts for Khaleesi_63:

(14, 20340), (18, 20433), (Start: 24 @20466 has 170 MA's), (29, 20505), (31, 20568), (39, 20667), (43, 20736), (44, 20745), (45, 20760),

Gene: Koguma_60 Start: 18842, Stop: 19150, Start Num: 24

Candidate Starts for Koguma_60:

(9, 18605), (14, 18716), (18, 18809), (Start: 24 @18842 has 170 MA's), (29, 18881), (31, 18944), (39, 19043), (43, 19112), (44, 19121), (45, 19136),

Gene: Krili_109 Start: 64941, Stop: 64627, Start Num: 22

Candidate Starts for Krili_109:

(5, 65328), (10, 65118), (17, 64989), (Start: 19 @64959 has 2 MA's), (Start: 22 @64941 has 22 MA's), (29, 64893), (33, 64794), (36, 64755), (39, 64731), (40, 64698), (41, 64695), (42, 64680),

Gene: LRRHood_60 Start: 20765, Stop: 21073, Start Num: 24

Candidate Starts for LRRHood_60:

(14, 20639), (18, 20732), (Start: 24 @20765 has 170 MA's), (29, 20804), (31, 20867), (39, 20966), (43, 21035), (44, 21044), (45, 21059),

Gene: Latch_63 Start: 19665, Stop: 19973, Start Num: 24

Candidate Starts for Latch_63:

(14, 19539), (18, 19632), (Start: 24 @19665 has 170 MA's), (29, 19704), (31, 19767), (43, 19935), (44, 19944), (45, 19959),

Gene: Lee7_62 Start: 20397, Stop: 20705, Start Num: 24

Candidate Starts for Lee7_62:

(14, 20271), (18, 20364), (Start: 24 @20397 has 170 MA's), (29, 20436), (31, 20499), (39, 20598), (43, 20667), (44, 20676), (45, 20691),

Gene: LifeSavor_63 Start: 19384, Stop: 19692, Start Num: 24

Candidate Starts for LifeSavor_63:

(14, 19258), (18, 19351), (Start: 24 @19384 has 170 MA's), (29, 19423), (31, 19486), (43, 19654), (44, 19663), (45, 19678),

Gene: LinStu_65 Start: 21472, Stop: 21780, Start Num: 24

Candidate Starts for LinStu_65:

(14, 21346), (18, 21439), (Start: 24 @21472 has 170 MA's), (29, 21511), (31, 21574), (43, 21742), (44, 21751), (45, 21766),

Gene: Littleton_63 Start: 19665, Stop: 19973, Start Num: 24

Candidate Starts for Littleton_63:

(14, 19539), (18, 19632), (Start: 24 @19665 has 170 MA's), (29, 19704), (31, 19767), (43, 19935), (44, 19944), (45, 19959),

Gene: Loanshark_64 Start: 20719, Stop: 21027, Start Num: 24
Candidate Starts for Loanshark_64:
(14, 20593), (18, 20686), (Start: 24 @20719 has 170 MA's), (29, 20758), (31, 20821), (39, 20920), (43, 20989), (44, 20998), (45, 21013),

Gene: LolaVinca_67 Start: 21880, Stop: 22188, Start Num: 24
Candidate Starts for LolaVinca_67:
(14, 21754), (18, 21847), (Start: 24 @21880 has 170 MA's), (29, 21919), (31, 21982), (39, 22081), (43, 22150), (44, 22159), (45, 22174),

Gene: LordLeafolot_69 Start: 22232, Stop: 22540, Start Num: 24
Candidate Starts for LordLeafolot_69:
(14, 22106), (18, 22199), (Start: 24 @22232 has 170 MA's), (29, 22271), (31, 22334), (39, 22433), (43, 22502), (44, 22511), (45, 22526),

Gene: Lukilu_57 Start: 19967, Stop: 20275, Start Num: 24
Candidate Starts for Lukilu_57:
(14, 19841), (18, 19934), (Start: 24 @19967 has 170 MA's), (29, 20006), (31, 20069), (39, 20168), (43, 20237), (44, 20246), (45, 20261),

Gene: Maby2021_64 Start: 20400, Stop: 20708, Start Num: 24
Candidate Starts for Maby2021_64:
(14, 20274), (18, 20367), (Start: 24 @20400 has 170 MA's), (29, 20439), (31, 20502), (39, 20601), (43, 20670), (44, 20679), (45, 20694),

Gene: MadKillah_110 Start: 64460, Stop: 64149, Start Num: 22
Candidate Starts for MadKillah_110:
(5, 64805), (10, 64595), (Start: 22 @64460 has 22 MA's), (29, 64415), (33, 64316), (36, 64277), (39, 64253), (40, 64220), (41, 64217), (42, 64202),

Gene: Mangeria_67 Start: 21743, Stop: 22051, Start Num: 24
Candidate Starts for Mangeria_67:
(14, 21617), (18, 21710), (Start: 24 @21743 has 170 MA's), (29, 21782), (31, 21845), (43, 22013), (44, 22022), (45, 22037),

Gene: Matsumoto_62 Start: 19626, Stop: 19934, Start Num: 24
Candidate Starts for Matsumoto_62:
(14, 19500), (18, 19593), (Start: 24 @19626 has 170 MA's), (29, 19665), (31, 19728), (43, 19896), (44, 19905), (45, 19920),

Gene: McGee_62 Start: 18849, Stop: 19157, Start Num: 24
Candidate Starts for McGee_62:
(14, 18723), (18, 18816), (Start: 24 @18849 has 170 MA's), (29, 18888), (31, 18951), (43, 19119), (44, 19128), (45, 19143),

Gene: McWolfish_62 Start: 20147, Stop: 20455, Start Num: 24
Candidate Starts for McWolfish_62:
(14, 20021), (18, 20114), (Start: 24 @20147 has 170 MA's), (29, 20186), (31, 20249), (39, 20348), (43, 20417), (44, 20426), (45, 20441),

Gene: Megamind_63 Start: 20385, Stop: 20693, Start Num: 24
Candidate Starts for Megamind_63:

(14, 20259), (18, 20352), (Start: 24 @20385 has 170 MA's), (29, 20424), (31, 20487), (39, 20586), (43, 20655), (44, 20664), (45, 20679),

Gene: Melpomini_59 Start: 19076, Stop: 19384, Start Num: 24

Candidate Starts for Melpomini_59:

(14, 18950), (18, 19043), (Start: 24 @19076 has 170 MA's), (29, 19115), (31, 19178), (43, 19346), (44, 19355), (45, 19370),

Gene: MikeLiesIn_64 Start: 20732, Stop: 21040, Start Num: 24

Candidate Starts for MikeLiesIn_64:

(14, 20606), (18, 20699), (Start: 24 @20732 has 170 MA's), (29, 20771), (31, 20834), (39, 20933), (43, 21002), (44, 21011), (45, 21026),

Gene: Mikro_62 Start: 21206, Stop: 21514, Start Num: 24

Candidate Starts for Mikro_62:

(14, 21080), (18, 21173), (Start: 24 @21206 has 170 MA's), (29, 21245), (31, 21308), (39, 21407), (43, 21476), (44, 21485), (45, 21500),

Gene: MoMoMixon_64 Start: 20817, Stop: 21125, Start Num: 24

Candidate Starts for MoMoMixon_64:

(14, 20691), (18, 20784), (Start: 24 @20817 has 170 MA's), (29, 20856), (31, 20919), (43, 21087), (44, 21096), (45, 21111),

Gene: Momo_62 Start: 19665, Stop: 19973, Start Num: 24

Candidate Starts for Momo_62:

(14, 19539), (18, 19632), (Start: 24 @19665 has 170 MA's), (29, 19704), (31, 19767), (43, 19935), (44, 19944), (45, 19959),

Gene: Mori_107 Start: 64966, Stop: 64652, Start Num: 22

Candidate Starts for Mori_107:

(5, 65353), (10, 65143), (17, 65014), (Start: 19 @64984 has 2 MA's), (Start: 22 @64966 has 22 MA's), (29, 64918), (33, 64819), (36, 64780), (39, 64756), (40, 64723), (41, 64720), (42, 64705),

Gene: Morizzled23_66 Start: 20691, Stop: 20999, Start Num: 24

Candidate Starts for Morizzled23_66:

(9, 20454), (14, 20565), (18, 20658), (Start: 24 @20691 has 170 MA's), (29, 20730), (31, 20793), (43, 20961), (44, 20970), (45, 20985),

Gene: Murai_107 Start: 64811, Stop: 64500, Start Num: 22

Candidate Starts for Murai_107:

(5, 65156), (10, 64946), (Start: 22 @64811 has 22 MA's), (29, 64766), (33, 64667), (36, 64628), (39, 64604), (40, 64571), (41, 64568), (42, 64553),

Gene: Naija_62 Start: 19665, Stop: 19973, Start Num: 24

Candidate Starts for Naija_62:

(14, 19539), (18, 19632), (Start: 24 @19665 has 170 MA's), (29, 19704), (31, 19767), (43, 19935), (44, 19944), (45, 19959),

Gene: Napoleon13_61 Start: 19058, Stop: 19366, Start Num: 24

Candidate Starts for Napoleon13_61:

(14, 18932), (18, 19025), (Start: 24 @19058 has 170 MA's), (29, 19097), (31, 19160), (39, 19259), (43, 19328), (44, 19337), (45, 19352),

Gene: Nappy_66 Start: 21020, Stop: 21328, Start Num: 24

Candidate Starts for Nappy_66:

(14, 20894), (18, 20987), (Start: 24 @21020 has 170 MA's), (29, 21059), (33, 21158), (36, 21197), (39, 21221), (43, 21290), (44, 21299), (45, 21314),

Gene: Naval22_70 Start: 21742, Stop: 22050, Start Num: 24

Candidate Starts for Naval22_70:

(14, 21616), (18, 21709), (Start: 24 @21742 has 170 MA's), (29, 21781), (31, 21844), (39, 21943), (43, 22012), (44, 22021), (45, 22036),

Gene: NedWong_65 Start: 20719, Stop: 21027, Start Num: 24

Candidate Starts for NedWong_65:

(14, 20593), (18, 20686), (Start: 24 @20719 has 170 MA's), (29, 20758), (31, 20821), (39, 20920), (43, 20989), (44, 20998), (45, 21013),

Gene: Ngannou_58 Start: 18647, Stop: 18955, Start Num: 24

Candidate Starts for Ngannou_58:

(14, 18521), (18, 18614), (Start: 24 @18647 has 170 MA's), (29, 18686), (31, 18749), (43, 18917), (44, 18926), (45, 18941),

Gene: Nidhogg_64 Start: 20573, Stop: 20881, Start Num: 24

Candidate Starts for Nidhogg_64:

(9, 20336), (14, 20447), (18, 20540), (Start: 24 @20573 has 170 MA's), (29, 20612), (31, 20675), (43, 20843), (44, 20852), (45, 20867),

Gene: NiebruSaylor_107 Start: 64100, Stop: 63768, Start Num: 19

Candidate Starts for NiebruSaylor_107:

(5, 64469), (10, 64259), (17, 64130), (Start: 19 @64100 has 2 MA's), (Start: 22 @64082 has 22 MA's), (29, 64034), (33, 63935), (36, 63896), (39, 63872), (40, 63839), (41, 63836), (42, 63821),

Gene: NoodleTree_64 Start: 20522, Stop: 20830, Start Num: 24

Candidate Starts for NoodleTree_64:

(14, 20396), (18, 20489), (Start: 24 @20522 has 170 MA's), (29, 20561), (31, 20624), (39, 20723), (43, 20792), (44, 20801), (45, 20816),

Gene: Norm_64 Start: 20720, Stop: 21028, Start Num: 24

Candidate Starts for Norm_64:

(14, 20594), (18, 20687), (Start: 24 @20720 has 170 MA's), (29, 20759), (31, 20822), (39, 20921), (43, 20990), (44, 20999), (45, 21014),

Gene: NuevoMundo_69 Start: 21721, Stop: 22029, Start Num: 24

Candidate Starts for NuevoMundo_69:

(14, 21595), (18, 21688), (Start: 24 @21721 has 170 MA's), (29, 21760), (31, 21823), (39, 21922), (43, 21991), (44, 22000), (45, 22015),

Gene: ParkTD_63 Start: 20719, Stop: 21027, Start Num: 24

Candidate Starts for ParkTD_63:

(14, 20593), (18, 20686), (Start: 24 @20719 has 170 MA's), (29, 20758), (31, 20821), (39, 20920), (43, 20989), (44, 20998), (45, 21013),

Gene: Patter_63 Start: 19682, Stop: 19990, Start Num: 24

Candidate Starts for Patter_63:

(14, 19556), (18, 19649), (Start: 24 @19682 has 170 MA's), (29, 19721), (31, 19784), (43, 19952), (44, 19961), (45, 19976),

Gene: Phendrix_194 Start: 104818, Stop: 104549, Start Num: 20

Candidate Starts for Phendrix_194:

(Start: 20 @104818 has 2 MA's), (29, 104761), (32, 104665), (34, 104653), (35, 104641),

Gene: Phlegm_65 Start: 19665, Stop: 19973, Start Num: 24

Candidate Starts for Phlegm_65:

(14, 19539), (18, 19632), (Start: 24 @19665 has 170 MA's), (29, 19704), (31, 19767), (43, 19935), (44, 19944), (45, 19959),

Gene: Phox_62 Start: 21447, Stop: 21755, Start Num: 24

Candidate Starts for Phox_62:

(14, 21321), (18, 21414), (Start: 24 @21447 has 170 MA's), (29, 21486), (31, 21549), (39, 21648), (43, 21717), (44, 21726), (45, 21741),

Gene: Phusco_63 Start: 20475, Stop: 20783, Start Num: 24

Candidate Starts for Phusco_63:

(14, 20349), (18, 20442), (Start: 24 @20475 has 170 MA's), (29, 20514), (31, 20577), (43, 20745), (44, 20754), (45, 20769),

Gene: Pier_66 Start: 20419, Stop: 20727, Start Num: 24

Candidate Starts for Pier_66:

(9, 20182), (14, 20293), (18, 20386), (Start: 24 @20419 has 170 MA's), (29, 20458), (33, 20557), (36, 20596), (39, 20620), (43, 20689), (44, 20698), (45, 20713),

Gene: Pinkcreek_56 Start: 19025, Stop: 19333, Start Num: 24

Candidate Starts for Pinkcreek_56:

(14, 18899), (18, 18992), (Start: 24 @19025 has 170 MA's), (29, 19064), (31, 19127), (43, 19295), (44, 19304), (45, 19319),

Gene: Pio_68 Start: 21873, Stop: 22181, Start Num: 24

Candidate Starts for Pio_68:

(14, 21747), (18, 21840), (Start: 24 @21873 has 170 MA's), (29, 21912), (31, 21975), (43, 22143), (44, 22152), (45, 22167),

Gene: Pivoine_62 Start: 19665, Stop: 19973, Start Num: 24

Candidate Starts for Pivoine_62:

(14, 19539), (18, 19632), (Start: 24 @19665 has 170 MA's), (29, 19704), (31, 19767), (43, 19935), (44, 19944), (45, 19959),

Gene: Pleione_66 Start: 20718, Stop: 21026, Start Num: 24

Candidate Starts for Pleione_66:

(14, 20592), (18, 20685), (Start: 24 @20718 has 170 MA's), (29, 20757), (31, 20820), (39, 20919), (43, 20988), (44, 20997), (45, 21012),

Gene: PurduePete_63 Start: 20443, Stop: 20751, Start Num: 24

Candidate Starts for PurduePete_63:

(14, 20317), (18, 20410), (Start: 24 @20443 has 170 MA's), (29, 20482), (31, 20545), (39, 20644), (43, 20713), (44, 20722), (45, 20737),

Gene: QBert_58 Start: 20456, Stop: 20764, Start Num: 24

Candidate Starts for QBert_58:

(9, 20219), (14, 20330), (18, 20423), (Start: 24 @20456 has 170 MA's), (29, 20495), (31, 20558), (43, 20726), (44, 20735), (45, 20750),

Gene: Quasimodo_63 Start: 20683, Stop: 20991, Start Num: 24

Candidate Starts for Quasimodo_63:

(14, 20557), (18, 20650), (Start: 24 @20683 has 170 MA's), (29, 20722), (31, 20785), (43, 20953), (44, 20962), (45, 20977),

Gene: Rabinovish_63 Start: 21743, Stop: 22051, Start Num: 24

Candidate Starts for Rabinovish_63:

(9, 21506), (14, 21617), (18, 21710), (Start: 24 @21743 has 170 MA's), (29, 21782), (31, 21845), (43, 22013), (44, 22022), (45, 22037),

Gene: Rahel_64 Start: 20034, Stop: 20342, Start Num: 24

Candidate Starts for Rahel_64:

(14, 19908), (18, 20001), (Start: 24 @20034 has 170 MA's), (29, 20073), (31, 20136), (43, 20304), (44, 20313), (45, 20328),

Gene: Rizal_62 Start: 19636, Stop: 19944, Start Num: 24

Candidate Starts for Rizal_62:

(14, 19510), (18, 19603), (Start: 24 @19636 has 170 MA's), (29, 19675), (31, 19738), (39, 19837), (43, 19906), (44, 19915), (45, 19930),

Gene: RoMag_58 Start: 19638, Stop: 19946, Start Num: 24

Candidate Starts for RoMag_58:

(14, 19512), (18, 19605), (Start: 24 @19638 has 170 MA's), (29, 19677), (31, 19740), (43, 19908), (44, 19917), (45, 19932),

Gene: Ronan_58 Start: 18264, Stop: 18572, Start Num: 24

Candidate Starts for Ronan_58:

(14, 18138), (18, 18231), (Start: 24 @18264 has 170 MA's), (29, 18303), (31, 18366), (39, 18465), (43, 18534), (44, 18543), (45, 18558),

Gene: Roots515_63 Start: 20520, Stop: 20828, Start Num: 24

Candidate Starts for Roots515_63:

(14, 20394), (18, 20487), (Start: 24 @20520 has 170 MA's), (29, 20559), (31, 20622), (39, 20721), (43, 20790), (44, 20799), (45, 20814),

Gene: Ryadel_111 Start: 65800, Stop: 65486, Start Num: 22

Candidate Starts for Ryadel_111:

(6, 66145), (10, 65935), (Start: 22 @65800 has 22 MA's), (29, 65752), (33, 65653), (36, 65614), (39, 65590), (40, 65557), (41, 65554), (42, 65539),

Gene: Salacia_66 Start: 20719, Stop: 21027, Start Num: 24

Candidate Starts for Salacia_66:

(14, 20593), (18, 20686), (Start: 24 @20719 has 170 MA's), (29, 20758), (31, 20821), (39, 20920), (43, 20989), (44, 20998), (45, 21013),

Gene: Sauce_65 Start: 20665, Stop: 20973, Start Num: 24

Candidate Starts for Sauce_65:

(9, 20428), (14, 20539), (18, 20632), (Start: 24 @20665 has 170 MA's), (29, 20704), (31, 20767), (43, 20935), (44, 20944), (45, 20959),

Gene: SchoolBus_106 Start: 64554, Stop: 64243, Start Num: 22

Candidate Starts for SchoolBus_106:

(6, 64899), (10, 64689), (Start: 22 @64554 has 22 MA's), (29, 64509), (33, 64410), (36, 64371), (39, 64347), (40, 64314), (41, 64311), (42, 64296),

Gene: Schuy_107 Start: 64173, Stop: 63862, Start Num: 22

Candidate Starts for Schuy_107:

(5, 64518), (10, 64308), (Start: 22 @64173 has 22 MA's), (29, 64128), (33, 64029), (36, 63990), (39, 63966), (40, 63933), (41, 63930), (42, 63915),

Gene: ScottMcG_62 Start: 20497, Stop: 20805, Start Num: 24

Candidate Starts for ScottMcG_62:

(9, 20260), (14, 20371), (18, 20464), (Start: 24 @20497 has 170 MA's), (29, 20536), (33, 20635), (36, 20674), (39, 20698), (43, 20767), (44, 20776), (45, 20791),

Gene: Sebata_66 Start: 21591, Stop: 21899, Start Num: 24

Candidate Starts for Sebata_66:

(14, 21465), (18, 21558), (Start: 24 @21591 has 170 MA's), (29, 21630), (31, 21693), (43, 21861), (44, 21870), (45, 21885),

Gene: Shaqnato_58 Start: 19187, Stop: 19495, Start Num: 24

Candidate Starts for Shaqnato_58:

(14, 19061), (18, 19154), (Start: 24 @19187 has 170 MA's), (29, 19226), (31, 19289), (39, 19388), (43, 19457), (44, 19466), (45, 19481),

Gene: Shelob_66 Start: 21711, Stop: 22019, Start Num: 24

Candidate Starts for Shelob_66:

(14, 21585), (18, 21678), (Start: 24 @21711 has 170 MA's), (29, 21750), (31, 21813), (39, 21912), (43, 21981), (44, 21990), (45, 22005),

Gene: ShiaLabeouf_63 Start: 20102, Stop: 20410, Start Num: 24

Candidate Starts for ShiaLabeouf_63:

(14, 19976), (18, 20069), (Start: 24 @20102 has 170 MA's), (29, 20141), (31, 20204), (43, 20372), (44, 20381), (45, 20396),

Gene: Shida_109 Start: 65065, Stop: 64754, Start Num: 22

Candidate Starts for Shida_109:

(1, 65485), (2, 65473), (3, 65452), (5, 65416), (10, 65200), (Start: 22 @65065 has 22 MA's), (29, 65020), (33, 64921), (36, 64882), (39, 64858), (40, 64825), (41, 64822), (42, 64807),

Gene: Shifa_57 Start: 19572, Stop: 19880, Start Num: 24

Candidate Starts for Shifa_57:

(9, 19335), (14, 19446), (18, 19539), (Start: 24 @19572 has 170 MA's), (29, 19611), (31, 19674), (43, 19842), (44, 19851), (45, 19866),

Gene: Shnickers_63 Start: 19661, Stop: 19969, Start Num: 24

Candidate Starts for Shnickers_63:

(14, 19535), (18, 19628), (Start: 24 @19661 has 170 MA's), (29, 19700), (31, 19763), (43, 19931), (44, 19940), (45, 19955),

Gene: Shrimp_64 Start: 20723, Stop: 21031, Start Num: 24

Candidate Starts for Shrimp_64:

(14, 20597), (18, 20690), (Start: 24 @20723 has 170 MA's), (29, 20762), (31, 20825), (39, 20924), (43, 20993), (44, 21002), (45, 21017),

Gene: SilverDipper_64 Start: 19665, Stop: 19973, Start Num: 24

Candidate Starts for SilverDipper_64:

(14, 19539), (18, 19632), (Start: 24 @19665 has 170 MA's), (29, 19704), (31, 19767), (43, 19935), (44, 19944), (45, 19959),

Gene: SmallFry_63 Start: 19661, Stop: 19969, Start Num: 24

Candidate Starts for SmallFry_63:

(14, 19535), (18, 19628), (Start: 24 @19661 has 170 MA's), (29, 19700), (31, 19763), (43, 19931), (44, 19940), (45, 19955),

Gene: Smooch_106 Start: 64948, Stop: 64634, Start Num: 22

Candidate Starts for Smooch_106:

(10, 65083), (Start: 22 @64948 has 22 MA's), (26, 64930), (29, 64900), (33, 64801), (36, 64762), (39, 64738), (40, 64705), (41, 64702), (42, 64687),

Gene: Spec_61 Start: 19805, Stop: 20113, Start Num: 24

Candidate Starts for Spec_61:

(14, 19679), (18, 19772), (Start: 24 @19805 has 170 MA's), (29, 19844), (31, 19907), (43, 20075), (44, 20084), (45, 20099),

Gene: Specks_69 Start: 22194, Stop: 22502, Start Num: 24

Candidate Starts for Specks_69:

(14, 22068), (18, 22161), (Start: 24 @22194 has 170 MA's), (29, 22233), (31, 22296), (43, 22464), (44, 22473), (45, 22488),

Gene: Sprinklers_60 Start: 19637, Stop: 19945, Start Num: 24

Candidate Starts for Sprinklers_60:

(14, 19511), (18, 19604), (Start: 24 @19637 has 170 MA's), (29, 19676), (31, 19739), (39, 19838), (43, 19907), (44, 19916), (45, 19931),

Gene: Spud_64 Start: 21034, Stop: 21342, Start Num: 24

Candidate Starts for Spud_64:

(14, 20908), (18, 21001), (Start: 24 @21034 has 170 MA's), (29, 21073), (31, 21136), (39, 21235), (43, 21304), (44, 21313), (45, 21328),

Gene: SrishMeg2525_63 Start: 20430, Stop: 20738, Start Num: 24

Candidate Starts for SrishMeg2525_63:

(14, 20304), (18, 20397), (Start: 24 @20430 has 170 MA's), (29, 20469), (31, 20532), (39, 20631), (43, 20700), (44, 20709), (45, 20724),

Gene: StephanieG_64 Start: 21037, Stop: 21345, Start Num: 24

Candidate Starts for StephanieG_64:

(9, 20800), (14, 20911), (18, 21004), (Start: 24 @21037 has 170 MA's), (29, 21076), (31, 21139), (43, 21307), (44, 21316), (45, 21331),

Gene: Stubby_59 Start: 20356, Stop: 20664, Start Num: 24

Candidate Starts for Stubby_59:

(14, 20230), (18, 20323), (Start: 24 @20356 has 170 MA's), (29, 20395), (31, 20458), (43, 20626), (44, 20635), (45, 20650),

Gene: StubbySaigey_63 Start: 19359, Stop: 19667, Start Num: 24

Candidate Starts for StubbySaigey_63:

(14, 19233), (18, 19326), (Start: 24 @19359 has 170 MA's), (29, 19398), (31, 19461), (39, 19560), (43, 19629), (44, 19638), (45, 19653),

Gene: Tainan_69 Start: 22271, Stop: 22540, Start Num: 29

Candidate Starts for Tainan_69:

(14, 22106), (18, 22199), (Start: 24 @22232 has 170 MA's), (29, 22271), (31, 22334), (39, 22433), (43, 22502), (44, 22511), (45, 22526),

Gene: Teardrop_63 Start: 19518, Stop: 19826, Start Num: 24

Candidate Starts for Teardrop_63:

(14, 19392), (18, 19485), (Start: 24 @19518 has 170 MA's), (29, 19557), (31, 19620), (43, 19788), (44, 19797), (45, 19812),

Gene: TelAviv_104 Start: 64790, Stop: 64479, Start Num: 22

Candidate Starts for TelAviv_104:

(6, 65135), (10, 64925), (Start: 22 @64790 has 22 MA's), (29, 64745), (33, 64646), (36, 64607), (39, 64583), (40, 64550), (41, 64547), (42, 64532),

Gene: TinyTim_64 Start: 20719, Stop: 21027, Start Num: 24

Candidate Starts for TinyTim_64:

(14, 20593), (18, 20686), (Start: 24 @20719 has 170 MA's), (29, 20758), (31, 20821), (39, 20920), (43, 20989), (44, 20998), (45, 21013),

Gene: Tonenili_74 Start: 23256, Stop: 23564, Start Num: 24

Candidate Starts for Tonenili_74:

(7, 22932), (8, 22986), (Start: 24 @23256 has 170 MA's), (29, 23295), (31, 23358), (40, 23490), (43, 23526),

Gene: Tortoise16_61 Start: 20169, Stop: 20477, Start Num: 24

Candidate Starts for Tortoise16_61:

(14, 20043), (18, 20136), (Start: 24 @20169 has 170 MA's), (29, 20208), (31, 20271), (43, 20439), (44, 20448), (45, 20463),

Gene: Trinitium_59 Start: 19122, Stop: 19430, Start Num: 24

Candidate Starts for Trinitium_59:

(14, 18996), (18, 19089), (Start: 24 @19122 has 170 MA's), (29, 19161), (31, 19224), (43, 19392), (44, 19401), (45, 19416),

Gene: Turret_58 Start: 18846, Stop: 19154, Start Num: 24

Candidate Starts for Turret_58:

(14, 18720), (18, 18813), (Start: 24 @18846 has 170 MA's), (29, 18885), (31, 18948), (43, 19116), (44, 19125), (45, 19140),

Gene: Tyke_65 Start: 21073, Stop: 21381, Start Num: 24

Candidate Starts for Tyke_65:

(14, 20947), (18, 21040), (Start: 24 @21073 has 170 MA's), (29, 21112), (31, 21175), (43, 21343), (44, 21352), (45, 21367),

Gene: Vagabond_103 Start: 64221, Stop: 63910, Start Num: 22

Candidate Starts for Vagabond_103:

(5, 64566), (10, 64356), (Start: 22 @64221 has 22 MA's), (29, 64176), (33, 64077), (36, 64038), (39, 64014), (40, 63981), (41, 63978), (42, 63963),

Gene: ValleyTerrace_63 Start: 19665, Stop: 19973, Start Num: 24

Candidate Starts for ValleyTerrace_63:

(14, 19539), (18, 19632), (Start: 24 @19665 has 170 MA's), (29, 19704), (31, 19767), (43, 19935), (44, 19944), (45, 19959),

Gene: Vorrps_107 Start: 64967, Stop: 64653, Start Num: 22

Candidate Starts for Vorrps_107:

(5, 65354), (10, 65144), (17, 65015), (Start: 19 @64985 has 2 MA's), (Start: 22 @64967 has 22 MA's), (29, 64919), (33, 64820), (36, 64781), (39, 64757), (40, 64724), (41, 64721), (42, 64706),

Gene: Wally_62 Start: 19274, Stop: 19582, Start Num: 24

Candidate Starts for Wally_62:

(14, 19148), (18, 19241), (Start: 24 @19274 has 170 MA's), (29, 19313), (31, 19376), (39, 19475), (43, 19544), (44, 19553), (45, 19568),

Gene: Wildflower_104 Start: 62974, Stop: 62660, Start Num: 22

Candidate Starts for Wildflower_104:

(10, 63109), (15, 63040), (Start: 22 @62974 has 22 MA's), (26, 62956), (29, 62926), (33, 62827), (36, 62788), (39, 62764), (40, 62731), (41, 62728), (42, 62713),

Gene: Willis_64 Start: 20614, Stop: 20922, Start Num: 24

Candidate Starts for Willis_64:

(14, 20488), (18, 20581), (Start: 24 @20614 has 170 MA's), (29, 20653), (31, 20716), (39, 20815), (43, 20884), (44, 20893), (45, 20908),

Gene: Winget_107 Start: 64858, Stop: 64547, Start Num: 22

Candidate Starts for Winget_107:

(5, 65203), (10, 64993), (Start: 22 @64858 has 22 MA's), (29, 64813), (33, 64714), (36, 64675), (39, 64651), (40, 64618), (41, 64615), (42, 64600),

Gene: Yassified_61 Start: 20024, Stop: 20332, Start Num: 24

Candidate Starts for Yassified_61:

(9, 19787), (14, 19898), (18, 19991), (Start: 24 @20024 has 170 MA's), (29, 20063), (31, 20126), (43, 20294), (44, 20303), (45, 20318),

Gene: YemiJoy2021_64 Start: 20400, Stop: 20708, Start Num: 24

Candidate Starts for YemiJoy2021_64:

(14, 20274), (18, 20367), (Start: 24 @20400 has 170 MA's), (29, 20439), (31, 20502), (39, 20601), (43, 20670), (44, 20679), (45, 20694),

Gene: YoungMoneyMata_63 Start: 19416, Stop: 19724, Start Num: 24

Candidate Starts for YoungMoneyMata_63:

(14, 19290), (18, 19383), (Start: 24 @19416 has 170 MA's), (29, 19455), (31, 19518), (43, 19686), (44, 19695), (45, 19710),

Gene: Yucca_64 Start: 20641, Stop: 20949, Start Num: 24

Candidate Starts for Yucca_64:

(14, 20515), (18, 20608), (Start: 24 @20641 has 170 MA's), (29, 20680), (31, 20743), (39, 20842), (43, 20911), (44, 20920), (45, 20935),

Gene: Yvonnetastic_3 Start: 1118, Stop: 807, Start Num: 25

Candidate Starts for Yvonnetastic_3:

(11, 1271), (12, 1262), (16, 1196), (23, 1130), (Start: 25 @1118 has 2 MA's), (27, 1097), (28, 1094), (30, 1085), (35, 968), (37, 947), (38, 944),

Gene: Zakhe101_102 Start: 63086, Stop: 62766, Start Num: 21

Candidate Starts for Zakhe101_102:

(10, 63215), (Start: 21 @63086 has 1 MA's), (29, 63032), (33, 62933), (36, 62894), (39, 62870), (40, 62837), (41, 62834), (42, 62819),

Gene: Zalkecks_65 Start: 20404, Stop: 20712, Start Num: 24

Candidate Starts for Zalkecks_65:

(14, 20278), (18, 20371), (Start: 24 @20404 has 170 MA's), (29, 20443), (31, 20506), (39, 20605), (43, 20674), (44, 20683), (45, 20698),

Gene: Zeenon_66 Start: 20706, Stop: 21014, Start Num: 24

Candidate Starts for Zeenon_66:

(14, 20580), (18, 20673), (Start: 24 @20706 has 170 MA's), (29, 20745), (31, 20808), (39, 20907), (43, 20976), (44, 20985), (45, 21000),

Gene: ZygoTaiga_64 Start: 20720, Stop: 21028, Start Num: 24

Candidate Starts for ZygoTaiga_64:

(14, 20594), (18, 20687), (Start: 24 @20720 has 170 MA's), (29, 20759), (31, 20822), (39, 20921), (43, 20990), (44, 20999), (45, 21014),