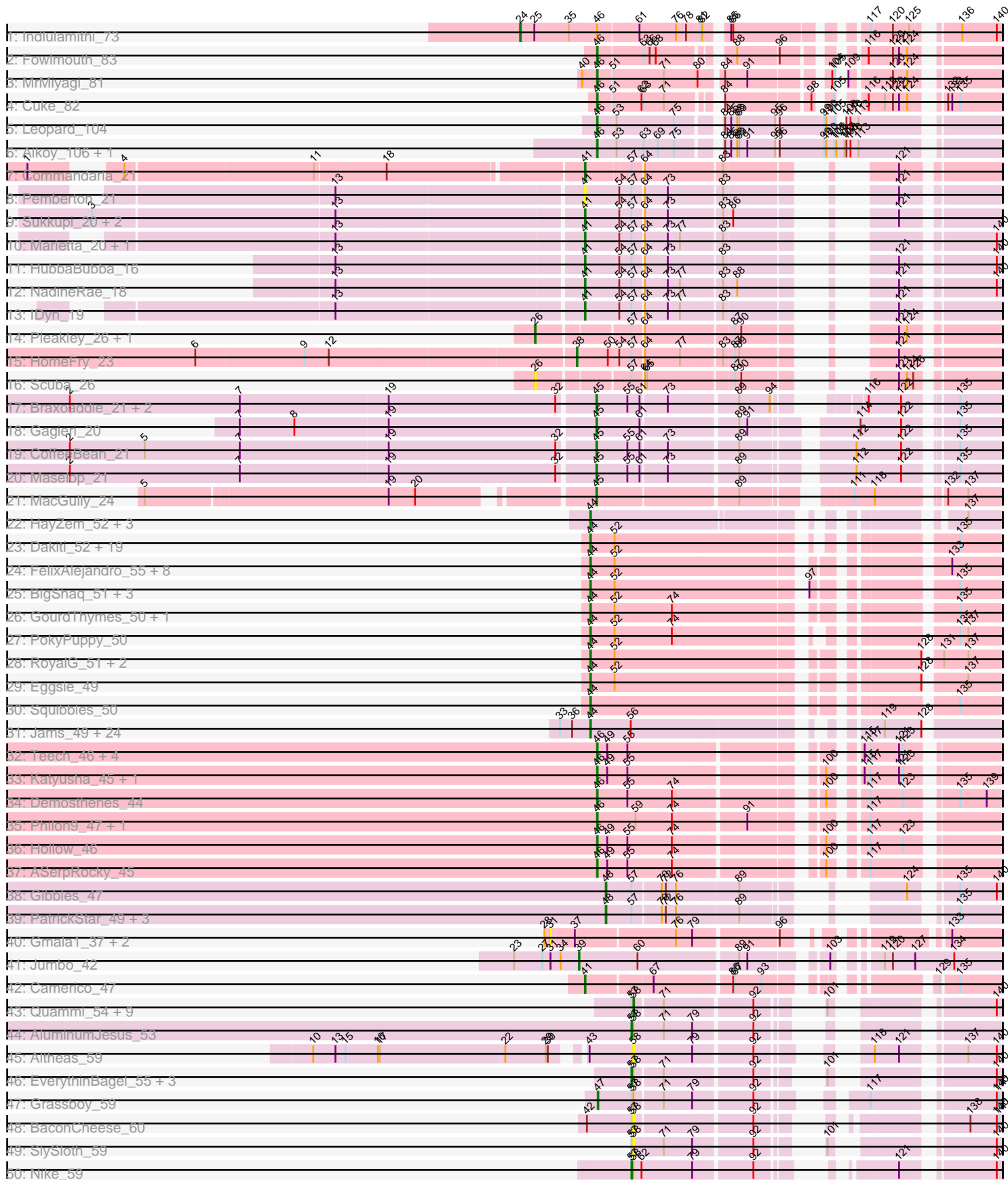
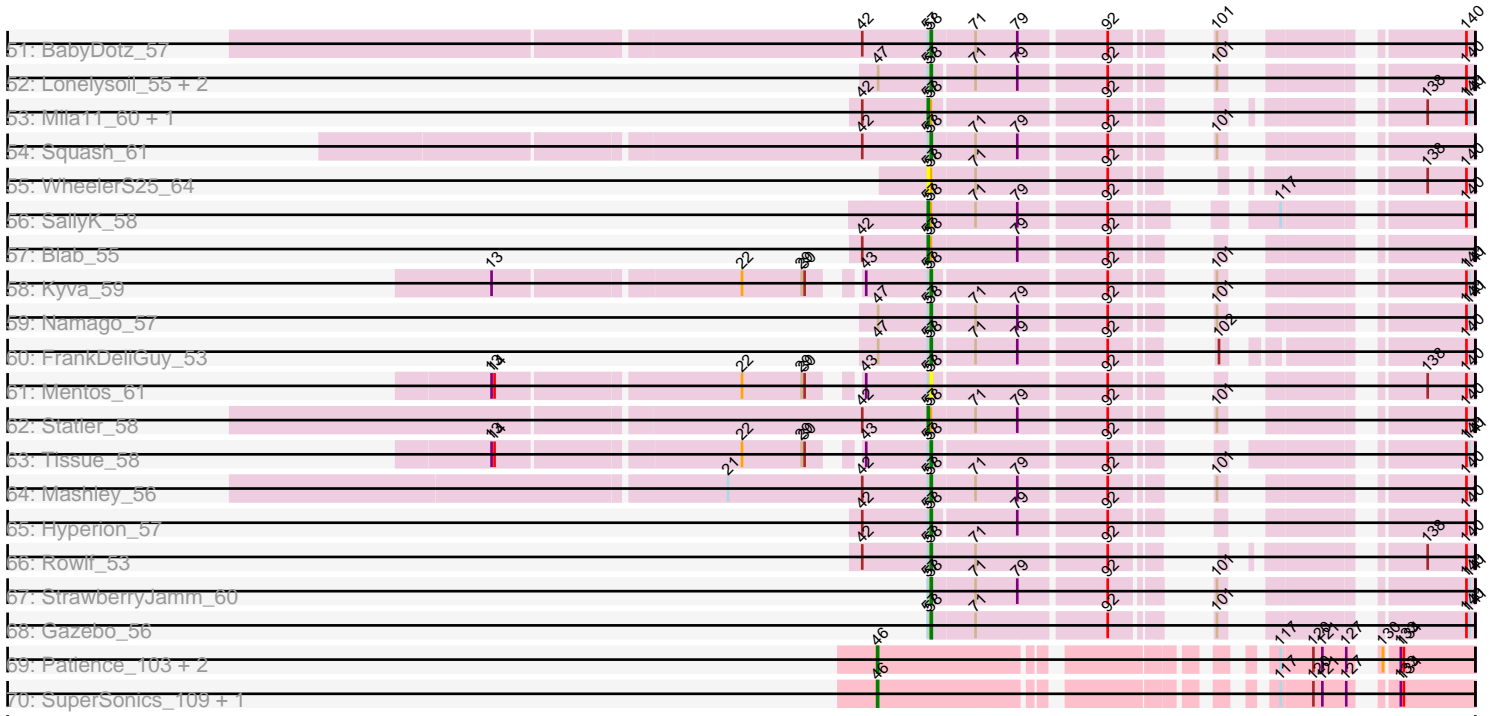


Pham 304755



Pham 304755



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 304755 Report

This analysis was run 06/08/26 on database version 649.

Pham number 304755 has 166 members, 20 are drafts.

Phages represented in each track:

- Track 1 : Indlulamithi_73
- Track 2 : Fowlmouth_83
- Track 3 : MrMiyagi_81
- Track 4 : Cuke_82
- Track 5 : Leopard_104
- Track 6 : Aikoy_106, Onyinye_105
- Track 7 : Commandaria_21
- Track 8 : Pemberton_21
- Track 9 : Sukkupi_20, BiPauneto_21, Yndexa_20
- Track 10 : Marietta_20, WhoseManz_20
- Track 11 : HubbaBubba_16
- Track 12 : NadineRae_18
- Track 13 : IDyn_19
- Track 14 : Pleakley_26, Fury_26
- Track 15 : HomeFry_23
- Track 16 : Scuba_26
- Track 17 : Braxoaddie_21, Polyuyuki_21, Apiary_21
- Track 18 : Gagjeri_20
- Track 19 : CoffeeBean_21
- Track 20 : Maselop_21
- Track 21 : MacGully_24
- Track 22 : HayZem_52, GMA7_42, GTE7_41, Amore2_53
- Track 23 : Dakiti_52, John316_54, CathyBurgh_50, Adgers_52, Chelms_51, Gorko_50, RemRem_51, BirksAndSocks_55, Hotorobo_50, Flakey_50, Lizzo_50, Linetti_52, Barbochs_49, Ekhein_51, Breezic_50, Monty_49, Sam12_50, Kelzog_52, Beaver_54, Exiguo_50
- Track 24 : FelixAlejandro_55, Jellybones_53, Msay19_55, CinnamonToast_56, Butterball_54, Boneham_54, BillyBobJr_56, Poland_55, Sombrero_51
- Track 25 : BigShaq_51, PierreThree_51, BenoitCattle_52, Crete_52
- Track 26 : GourdThymes_50, Worcestershire_51
- Track 27 : PokyPuppy_50
- Track 28 : RoyalG_51, Diabla_54, SteveFrench_50
- Track 29 : Eggsie_49
- Track 30 : Squibbles_50
- Track 31 : Jams_49, Anamika_49, Hail2Pitt_48, Charianelly_49, Jormungandr_49, Shelley_49, GalacticEye_49, MrWormie_49, Harambe_49, Luker_50, Kaseim_49, Newt_50, Damp_49, Sticker17_49, Nimi13_49, Teal_49, Hello_49, Berries_49,

- Lahirium_49, Neoevie_49, Woes_49, Minos_50, Lidong_49, Bianmat_49, Guillaume_49
- Track 32 : Teech_46, Tredge_46, Niagara_45, Kvothe_45, Teatealatte_46
 - Track 33 : Katyusha_45, Benczkowski14_45
 - Track 34 : Demosthenes_44
 - Track 35 : Philon9_47, Vitaenoi_47
 - Track 36 : Hollow_46
 - Track 37 : ASerpRocky_45
 - Track 38 : Gibbles_47
 - Track 39 : PatrickStar_49, RobinSparkles_52, Orchid_48, Kampe_49
 - Track 40 : Gmala1_37, GordDuk1_37, GordTnk2_37
 - Track 41 : Jumbo_42
 - Track 42 : Camerico_47
 - Track 43 : Quammi_54, Wheelie_56, Casend_57, Llemily_56, Sillytadpoles_57, DonaldDuck_56, Viceroy_55, Zhafia_59, Wayne3_58, Teehee_57
 - Track 44 : AluminumJesus_53
 - Track 45 : Altheas_59
 - Track 46 : EverythinBagel_55, Jehoshaphat_58, Rudy_54, Phabia_56
 - Track 47 : Grassboy_59
 - Track 48 : BaconCheese_60
 - Track 49 : SlySloth_59
 - Track 50 : Nike_59
 - Track 51 : BabyDotz_57
 - Track 52 : Lonelysoil_55, Zagie_57, Judebell_58
 - Track 53 : Mila11_60, MorillMayhem_58
 - Track 54 : Squash_61
 - Track 55 : WheelerS25_64
 - Track 56 : SallyK_58
 - Track 57 : Blab_55
 - Track 58 : Kyva_59
 - Track 59 : Namago_57
 - Track 60 : FrankDeliGuy_53
 - Track 61 : Mentos_61
 - Track 62 : Statler_58
 - Track 63 : Tissue_58
 - Track 64 : Mashley_56
 - Track 65 : Hyperion_57
 - Track 66 : Rowlf_53
 - Track 67 : StrawberryJamm_60
 - Track 68 : Gazebo_56
 - Track 69 : Patience_103, Madruga_101, Demikore_104
 - Track 70 : SuperSonics_109, Labelle_102

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

The start number called the most often in the published annotations is 44, it was called in 63 of the 146 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Adgers_52, Amore2_53, Anamika_49, Barbochs_49, Beaver_54, BenoitCattle_52, Berries_49, Bianmat_49, BigShaq_51, BillyBobJr_56, BirksAndSocks_55, Boneham_54, Breezic_50, Butterball_54, CathyBurgh_50, Charianelly_49, Chelms_51, CinnamonToast_56, Crete_52, Dakiti_52, Damp_49, Diabla_54, Eggsie_49, Ekhein_51, Exiguo_50, FelixAlejandro_55, Flakey_50, GMA7_42, GTE7_41, GalacticEye_49, Gorko_50, GourdThymes_50, Guillaume_49, Hail2Pitt_48, Harambe_49, HayZem_52, Hello_49, Hotorobo_50, Jams_49, Jellybones_53, John316_54, Jormungandr_49, Kaseim_49, Kelzog_52, Lahirium_49, Lidong_49, Linetti_52, Lizzo_50, Luker_50, Minos_50, Monty_49, MrWormie_49, Msay19_55, Neoevie_49, Newt_50, Nimi13_49, PierreThree_51, PokyPuppy_50, Poland_55, RemRem_51, RoyalG_51, Sam12_50, Shelley_49, Sombrero_51, Squibbles_50, SteveFrench_50, Sticker17_49, Teal_49, Woes_49, Worcestershire_51,

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

-

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

- ASerpRocky_45, Aikoy_106, Altheas_59, AluminumJesus_53, Apiary_21, BabyDotz_57, BaconCheese_60, Benczkowski14_45, BiPauneto_21, Blab_55, Braxoaddie_21, Camerico_47, Casend_57, CoffeeBean_21, Commandaria_21, Cuke_82, Demikore_104, Demosthenes_44, DonaldDuck_56, EverythinBagel_55, Fowlmouth_83, FrankDeliGuy_53, Fury_26, Gagieri_20, Gazebo_56, Gibbles_47, Gmala1_37, GordDuk1_37, GordTnk2_37, Grassboy_59, Hollow_46, HomeFry_23, HubbaBubba_16, Hyperion_57, IDyn_19, Indlulamithi_73, Jehoshaphat_58, Judebell_58, Jumbo_42, Kampe_49, Katyusha_45, Kvothe_45, Kyva_59, Labelle_102, Leopard_104, Lemily_56, Lonelysoil_55, MacGully_24, Madruga_101, Marietta_20, Maselop_21, Mashley_56, Mentos_61, Mila11_60, MorillMayhem_58, MrMiyagi_81, NadineRae_18, Namago_57, Niagara_45, Nike_59, Onyinye_105, Orchid_48, Patience_103, PatrickStar_49, Pemberton_21, Phabia_56, Philon9_47, Pleakley_26, Polyyuki_21, Quammi_54, RobinSparkles_52, Rowlf_53, Rudy_54, SallyK_58, Scuba_26, Sillytadpoles_57, SlySloth_59, Squash_61, Statler_58, StrawberryJamm_60, Sukkupi_20, SuperSonics_109, Teatealatte_46, Teech_46, Teehee_57, Tissue_58, Tredge_46, Viceroy_55, Vitaenoi_47, Wayne3_58, WheelerS25_64, Wheelie_56, WhoseManz_20, Yndexa_20, Zagie_57, Zhafia_59,

Summary by start number:

Start 24:

- Found in 1 of 166 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 146
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Indlulamithi_73 (AC),

Start 26:

- Found in 3 of 166 (1.8%) of genes in pham
- Manual Annotations of this start: 2 of 146
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Fury_26 (CR5), Pleakley_26 (CR5), Scuba_26 (CR5),

Start 31:

- Found in 4 of 166 (2.4%) of genes in pham

- No Manual Annotations of this start.
- Called 75.0% of time when present
- Phage (with cluster) where this start called: Gmala1_37 (DF1), GordDuk1_37 (DF1), GordTnk2_37 (DF1),

Start 38:

- Found in 1 of 166 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 146
- Called 100.0% of time when present
- Phage (with cluster) where this start called: HomeFry_23 (CR5),

Start 39:

- Found in 1 of 166 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 146
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Jumbo_42 (DF3),

Start 41:

- Found in 11 of 166 (6.6%) of genes in pham
- Manual Annotations of this start: 10 of 146
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BiPauneto_21 (CR4), Camerico_47 (DF4), Commandaria_21 (CR2), HubbaBubba_16 (CR4), IDyn_19 (CR4), Marietta_20 (CR4), NadineRae_18 (CR4), Pemberton_21 (CR4), Sukkupi_20 (CR4), WhoseManz_20 (CR4), Yndexa_20 (CR4),

Start 44:

- Found in 70 of 166 (42.2%) of genes in pham
- Manual Annotations of this start: 63 of 146
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Adgers_52 (CS2), Amore2_53 (CS1), Anamika_49 (CS3), Barbochs_49 (CS2), Beaver_54 (CS2), BenoitCattle_52 (CS2), Berries_49 (CS3), Bianmat_49 (CS3), BigShaq_51 (CS2), BillyBobJr_56 (CS2), BirksAndSocks_55 (CS2), Boneham_54 (CS2), Breezic_50 (CS2), Butterball_54 (CS2), CathyBurgh_50 (CS2), Charianelly_49 (CS3), Chelms_51 (CS2), CinnamonToast_56 (CS2), Crete_52 (CS2), Dakiti_52 (CS2), Damp_49 (CS3), Diabla_54 (CS2), Eggsie_49 (CS2), Ekhein_51 (CS2), Exiguo_50 (CS2), FelixAlejandro_55 (CS2), Flakey_50 (CS2), GMA7_42 (CS1), GTE7_41 (CS1), GalacticEye_49 (CS3), Gorko_50 (CS2), GourdThymes_50 (CS2), Guillaume_49 (CS3), Hail2Pitt_48 (CS3), Harambe_49 (CS3), HayZem_52 (CS1), Hello_49 (CS3), Hotorobo_50 (CS2), Jams_49 (CS3), Jellybones_53 (CS2), John316_54 (CS2), Jormungandr_49 (CS3), Kaseim_49 (CS3), Kelzog_52 (CS2), Lahirium_49 (CS3), Lidong_49 (CS3), Linetti_52 (CS2), Lizzo_50 (CS2), Luker_50 (CS3), Minos_50 (CS3), Monty_49 (CS2), MrWormie_49 (CS3), Msay19_55 (CS2), Neoevie_49 (CS3), Newt_50 (CS3), Nimi13_49 (CS3), PierreThree_51 (CS2), PokyPuppy_50 (CS2), Poland_55 (CS2), RemRem_51 (CS2), RoyalG_51 (CS2), Sam12_50 (CS2), Shelley_49 (CS3), Sombrero_51 (CS2), Squibbles_50 (CS2), SteveFrench_50 (CS2), Sticker17_49 (CS3), Teal_49 (CS3), Woes_49 (CS3), Worcestershire_51 (CS2),

Start 45:

- Found in 7 of 166 (4.2%) of genes in pham
- Manual Annotations of this start: 7 of 146
- Called 100.0% of time when present

- Phage (with cluster) where this start called: Apiary_21 (CR6), Braxoaddie_21 (CR6), CoffeeBean_21 (CR6), Gagieri_20 (CR6), MacGully_24 (CR7), Maselop_21 (CR6), Polyyuki_21 (CR6),

Start 46:

- Found in 24 of 166 (14.5%) of genes in pham
- Manual Annotations of this start: 21 of 146
- Called 95.8% of time when present
- Phage (with cluster) where this start called: ASerpRocky_45 (CS4), Aikoy_106 (AE), Benczkowski14_45 (CS4), Cuke_82 (AC), Demikore_104 (U), Demosthenes_44 (CS4), Fowlmouth_83 (AC), Hollow_46 (CS4), Katyusha_45 (CS4), Kvothe_45 (CS4), Labelle_102 (U), Leopard_104 (AE), Madrugua_101 (U), MrMiyagi_81 (AC), Niagara_45 (CS4), Onyinye_105 (AE), Patience_103 (U), Philon9_47 (CS4), SuperSonics_109 (U), Teatealatte_46 (CS4), Teech_46 (CS4), Tredge_46 (CS4), Vitaenoi_47 (CS4),

Start 47:

- Found in 6 of 166 (3.6%) of genes in pham
- Manual Annotations of this start: 1 of 146
- Called 16.7% of time when present
- Phage (with cluster) where this start called: Grassboy_59 (EG),

Start 48:

- Found in 5 of 166 (3.0%) of genes in pham
- Manual Annotations of this start: 5 of 146
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gibbles_47 (CX), Kampe_49 (CX), Orchid_48 (CX), PatrickStar_49 (CX), RobinSparkles_52 (CX),

Start 57:

- Found in 59 of 166 (35.5%) of genes in pham
- Manual Annotations of this start: 10 of 146
- Called 20.3% of time when present
- Phage (with cluster) where this start called: AluminumJesus_53 (EG), Blab_55 (EG), EverythinBagel_55 (EG), Jehoshaphat_58 (EG), Mila11_60 (EG), MorillMayhem_58 (EG), Nike_59 (EG), Phabia_56 (EG), Rudy_54 (EG), SallyK_58 (EG), Statler_58 (EG), WheelerS25_64 (EG),

Start 58:

- Found in 41 of 166 (24.7%) of genes in pham
- Manual Annotations of this start: 24 of 146
- Called 68.3% of time when present
- Phage (with cluster) where this start called: Altheas_59 (EG), BabyDotz_57 (EG), BaconCheese_60 (EG), Casend_57 (EG), DonaldDuck_56 (EG), FrankDeliGuy_53 (EG), Gazebo_56 (EG), Hyperion_57 (EG), Judebell_58 (EG), Kyva_59 (EG), Llemily_56 (EG), Lonelysoil_55 (EG), Mashley_56 (EG), Mentos_61 (EG), Namago_57 (EG), Quammii_54 (EG), Rowlf_53 (EG), Sillytadpoles_57 (EG), SlySloth_59 (EG), Squash_61 (EG), StrawberryJamm_60 (EG), Teehee_57 (EG), Tissue_58 (EG), Viceroy_55 (EG), Wayne3_58 (EG), Wheelie_56 (EG), Zagie_57 (EG), Zhafia_59 (EG),

Summary by clusters:

There are 17 clusters represented in this pham: CR2, AC, CR7, AE, CR6, CR4, CR5, DF4, EG, DF1, DF3, CX, U, CS4, CS1, CS3, CS2,

Info for manual annotations of cluster AC:

- Start number 24 was manually annotated 1 time for cluster AC.
- Start number 46 was manually annotated 3 times for cluster AC.

Info for manual annotations of cluster AE:

- Start number 46 was manually annotated 3 times for cluster AE.

Info for manual annotations of cluster CR2:

- Start number 41 was manually annotated 1 time for cluster CR2.

Info for manual annotations of cluster CR4:

- Start number 41 was manually annotated 8 times for cluster CR4.

Info for manual annotations of cluster CR5:

- Start number 26 was manually annotated 2 times for cluster CR5.
- Start number 38 was manually annotated 1 time for cluster CR5.

Info for manual annotations of cluster CR6:

- Start number 45 was manually annotated 6 times for cluster CR6.

Info for manual annotations of cluster CR7:

- Start number 45 was manually annotated 1 time for cluster CR7.

Info for manual annotations of cluster CS1:

- Start number 44 was manually annotated 2 times for cluster CS1.

Info for manual annotations of cluster CS2:

- Start number 44 was manually annotated 36 times for cluster CS2.

Info for manual annotations of cluster CS3:

- Start number 44 was manually annotated 25 times for cluster CS3.

Info for manual annotations of cluster CS4:

- Start number 46 was manually annotated 12 times for cluster CS4.

Info for manual annotations of cluster CX:

- Start number 48 was manually annotated 5 times for cluster CX.

Info for manual annotations of cluster DF3:

- Start number 39 was manually annotated 1 time for cluster DF3.

Info for manual annotations of cluster DF4:

- Start number 41 was manually annotated 1 time for cluster DF4.

Info for manual annotations of cluster EG:

- Start number 47 was manually annotated 1 time for cluster EG.
- Start number 57 was manually annotated 10 times for cluster EG.
- Start number 58 was manually annotated 24 times for cluster EG.

Info for manual annotations of cluster U:

•Start number 46 was manually annotated 3 times for cluster U.

Gene Information:

Gene: ASerpRocky_45 Start: 46949, Stop: 46455, Start Num: 46

Candidate Starts for ASerpRocky_45:

(Start: 46 @46949 has 21 MA's), (49, 46934), (55, 46907), (74, 46841), (100, 46658), (117, 46619),

Gene: Adgers_52 Start: 46769, Stop: 46248, Start Num: 44

Candidate Starts for Adgers_52:

(Start: 44 @46769 has 63 MA's), (52, 46733), (135, 46307),

Gene: Aikoy_106 Start: 67335, Stop: 67865, Start Num: 46

Candidate Starts for Aikoy_106:

(Start: 46 @67335 has 21 MA's), (53, 67362), (63, 67401), (69, 67422), (75, 67443), (84, 67494), (85, 67503), (88, 67512), (89, 67515), (91, 67527), (95, 67566), (96, 67569), (99, 67635), (100, 67638), (105, 67650), (106, 67653), (107, 67665), (108, 67668), (110, 67674), (113, 67686),

Gene: Altheas_59 Start: 43024, Stop: 42620, Start Num: 58

Candidate Starts for Altheas_59:

(10, 43459), (13, 43426), (15, 43411), (16, 43366), (17, 43363), (22, 43180), (29, 43120), (30, 43117), (43, 43087), (Start: 58 @43024 has 24 MA's), (79, 42937), (92, 42856), (118, 42775), (121, 42739), (137, 42670), (140, 42628),

Gene: AluminumJesus_53 Start: 41962, Stop: 41567, Start Num: 57

Candidate Starts for AluminumJesus_53:

(Start: 57 @41962 has 10 MA's), (Start: 58 @41959 has 24 MA's), (71, 41917), (79, 41875), (92, 41794),

Gene: Amore2_53 Start: 47169, Stop: 46684, Start Num: 44

Candidate Starts for Amore2_53:

(Start: 44 @47169 has 63 MA's), (137, 46731),

Gene: Anamika_49 Start: 47821, Stop: 47318, Start Num: 44

Candidate Starts for Anamika_49:

(33, 47866), (36, 47848), (Start: 44 @47821 has 63 MA's), (56, 47761), (119, 47470), (128, 47416),

Gene: Apiary_21 Start: 10881, Stop: 11363, Start Num: 45

Candidate Starts for Apiary_21:

(2, 10119), (7, 10371), (19, 10587), (32, 10830), (Start: 45 @10881 has 7 MA's), (55, 10926), (61, 10944), (73, 10980), (89, 11076), (94, 11121), (116, 11196), (122, 11241), (135, 11301),

Gene: BabyDotz_57 Start: 43429, Stop: 43037, Start Num: 58

Candidate Starts for BabyDotz_57:

(42, 43498), (Start: 57 @43432 has 10 MA's), (Start: 58 @43429 has 24 MA's), (71, 43387), (79, 43345), (92, 43264), (101, 43219), (140, 43045),

Gene: BaconCheese_60 Start: 43894, Stop: 43499, Start Num: 58

Candidate Starts for BaconCheese_60:

(42, 43963), (Start: 57 @43897 has 10 MA's), (Start: 58 @43894 has 24 MA's), (92, 43732), (138, 43546), (140, 43507), (141, 43504),

Gene: Barbochs_49 Start: 46513, Stop: 45992, Start Num: 44

Candidate Starts for Barbochs_49:

(Start: 44 @46513 has 63 MA's), (52, 46477), (135, 46051),

Gene: Beaver_54 Start: 48283, Stop: 47762, Start Num: 44

Candidate Starts for Beaver_54:

(Start: 44 @48283 has 63 MA's), (52, 48247), (135, 47821),

Gene: Benczkowski14_45 Start: 47238, Stop: 46744, Start Num: 46

Candidate Starts for Benczkowski14_45:

(Start: 46 @47238 has 21 MA's), (49, 47223), (55, 47196), (100, 46947), (115, 46917), (117, 46908), (121, 46866), (123, 46860),

Gene: BenoitCattle_52 Start: 47030, Stop: 46509, Start Num: 44

Candidate Starts for BenoitCattle_52:

(Start: 44 @47030 has 63 MA's), (52, 46994), (97, 46736), (135, 46568),

Gene: Berries_49 Start: 47793, Stop: 47290, Start Num: 44

Candidate Starts for Berries_49:

(33, 47838), (36, 47820), (Start: 44 @47793 has 63 MA's), (56, 47733), (119, 47442), (128, 47388),

Gene: BiPauneto_21 Start: 8586, Stop: 9044, Start Num: 41

Candidate Starts for BiPauneto_21:

(3, 7887), (13, 8232), (Start: 41 @8586 has 10 MA's), (54, 8634), (Start: 57 @8652 has 10 MA's), (64, 8667), (73, 8700), (83, 8775), (86, 8787), (121, 8916),

Gene: Bianmat_49 Start: 47833, Stop: 47330, Start Num: 44

Candidate Starts for Bianmat_49:

(33, 47878), (36, 47860), (Start: 44 @47833 has 63 MA's), (56, 47773), (119, 47482), (128, 47428),

Gene: BigShaq_51 Start: 47035, Stop: 46514, Start Num: 44

Candidate Starts for BigShaq_51:

(Start: 44 @47035 has 63 MA's), (52, 46999), (97, 46741), (135, 46573),

Gene: BillyBobJr_56 Start: 48593, Stop: 48072, Start Num: 44

Candidate Starts for BillyBobJr_56:

(Start: 44 @48593 has 63 MA's), (52, 48557), (133, 48143),

Gene: BirksAndSocks_55 Start: 48633, Stop: 48112, Start Num: 44

Candidate Starts for BirksAndSocks_55:

(Start: 44 @48633 has 63 MA's), (52, 48597), (135, 48171),

Gene: Blab_55 Start: 42584, Stop: 42189, Start Num: 57

Candidate Starts for Blab_55:

(42, 42650), (Start: 57 @42584 has 10 MA's), (Start: 58 @42581 has 24 MA's), (79, 42497), (92, 42416),

Gene: Boneham_54 Start: 48534, Stop: 48013, Start Num: 44

Candidate Starts for Boneham_54:

(Start: 44 @48534 has 63 MA's), (52, 48498), (133, 48084),

Gene: Braxoaddie_21 Start: 10869, Stop: 11351, Start Num: 45

Candidate Starts for Braxoaddie_21:

(2, 10107), (7, 10359), (19, 10575), (32, 10818), (Start: 45 @10869 has 7 MA's), (55, 10914), (61, 10932), (73, 10968), (89, 11064), (94, 11109), (116, 11184), (122, 11229), (135, 11289),

Gene: Breezic_50 Start: 46526, Stop: 46005, Start Num: 44

Candidate Starts for Breezic_50:

(Start: 44 @46526 has 63 MA's), (52, 46490), (135, 46064),

Gene: Butterball_54 Start: 48539, Stop: 48018, Start Num: 44

Candidate Starts for Butterball_54:

(Start: 44 @48539 has 63 MA's), (52, 48503), (133, 48089),

Gene: Camerico_47 Start: 46654, Stop: 46154, Start Num: 41

Candidate Starts for Camerico_47:

(Start: 41 @46654 has 10 MA's), (67, 46561), (86, 46453), (87, 46450), (93, 46411), (129, 46240), (135, 46216),

Gene: Casend_57 Start: 42837, Stop: 42448, Start Num: 58

Candidate Starts for Casend_57:

(Start: 57 @42840 has 10 MA's), (Start: 58 @42837 has 24 MA's), (71, 42798), (92, 42675), (101, 42630), (140, 42456),

Gene: CathyBurgh_50 Start: 47103, Stop: 46582, Start Num: 44

Candidate Starts for CathyBurgh_50:

(Start: 44 @47103 has 63 MA's), (52, 47067), (135, 46641),

Gene: Charianelly_49 Start: 47543, Stop: 47040, Start Num: 44

Candidate Starts for Charianelly_49:

(33, 47588), (36, 47570), (Start: 44 @47543 has 63 MA's), (56, 47483), (119, 47192), (128, 47138),

Gene: Chelms_51 Start: 47023, Stop: 46514, Start Num: 44

Candidate Starts for Chelms_51:

(Start: 44 @47023 has 63 MA's), (52, 46987), (135, 46573),

Gene: CinnamonToast_56 Start: 48593, Stop: 48072, Start Num: 44

Candidate Starts for CinnamonToast_56:

(Start: 44 @48593 has 63 MA's), (52, 48557), (133, 48143),

Gene: CoffeeBean_21 Start: 10806, Stop: 11321, Start Num: 45

Candidate Starts for CoffeeBean_21:

(2, 10044), (5, 10155), (7, 10296), (19, 10512), (32, 10755), (Start: 45 @10806 has 7 MA's), (55, 10851), (61, 10869), (73, 10905), (89, 11001), (112, 11136), (122, 11199), (135, 11259),

Gene: Commandaria_21 Start: 9793, Stop: 10248, Start Num: 41

Candidate Starts for Commandaria_21:

(1, 9061), (4, 9148), (11, 9418), (18, 9520), (Start: 41 @9793 has 10 MA's), (Start: 57 @9856 has 10 MA's), (64, 9871), (83, 9979), (121, 10120),

Gene: Crete_52 Start: 47301, Stop: 46780, Start Num: 44

Candidate Starts for Crete_52:

(Start: 44 @47301 has 63 MA's), (52, 47265), (97, 47007), (135, 46839),

Gene: Cuke_82 Start: 48535, Stop: 49002, Start Num: 46

Candidate Starts for Cuke_82:

(Start: 46 @48535 has 21 MA's), (51, 48553), (62, 48595), (63, 48598), (71, 48628), (84, 48685), (98, 48799), (105, 48817), (116, 48841), (119, 48862), (120, 48874), (121, 48883), (124, 48895), (132, 48922), (133, 48928), (135, 48940),

Gene: Dakiti_52 Start: 47891, Stop: 47382, Start Num: 44

Candidate Starts for Dakiti_52:

(Start: 44 @47891 has 63 MA's), (52, 47855), (135, 47441),

Gene: Damp_49 Start: 46707, Stop: 46204, Start Num: 44

Candidate Starts for Damp_49:

(33, 46752), (36, 46734), (Start: 44 @46707 has 63 MA's), (56, 46647), (119, 46356), (128, 46302),

Gene: Demikore_104 Start: 64612, Stop: 65076, Start Num: 46

Candidate Starts for Demikore_104:

(Start: 46 @64612 has 21 MA's), (117, 64918), (120, 64948), (121, 64957), (127, 64978), (130, 64990), (133, 65002), (134, 65005),

Gene: Demosthenes_44 Start: 46925, Stop: 46431, Start Num: 46

Candidate Starts for Demosthenes_44:

(Start: 46 @46925 has 21 MA's), (55, 46883), (74, 46817), (100, 46634), (117, 46595), (123, 46547), (135, 46490), (139, 46451),

Gene: Diabla_54 Start: 48464, Stop: 47943, Start Num: 44

Candidate Starts for Diabla_54:

(Start: 44 @48464 has 63 MA's), (52, 48428), (128, 48041), (131, 48026), (137, 47990),

Gene: DonaldDuck_56 Start: 42186, Stop: 41797, Start Num: 58

Candidate Starts for DonaldDuck_56:

(Start: 57 @42189 has 10 MA's), (Start: 58 @42186 has 24 MA's), (71, 42147), (92, 42024), (101, 41979), (140, 41805),

Gene: Eggsie_49 Start: 46426, Stop: 45905, Start Num: 44

Candidate Starts for Eggsie_49:

(Start: 44 @46426 has 63 MA's), (52, 46390), (128, 46003), (137, 45952),

Gene: Ekhein_51 Start: 46231, Stop: 45710, Start Num: 44

Candidate Starts for Ekhein_51:

(Start: 44 @46231 has 63 MA's), (52, 46195), (135, 45769),

Gene: EverythinBagel_55 Start: 42550, Stop: 42158, Start Num: 57

Candidate Starts for EverythinBagel_55:

(Start: 57 @42550 has 10 MA's), (Start: 58 @42547 has 24 MA's), (71, 42508), (92, 42385), (101, 42340), (140, 42166),

Gene: Exiguo_50 Start: 46243, Stop: 45722, Start Num: 44

Candidate Starts for Exiguo_50:

(Start: 44 @46243 has 63 MA's), (52, 46207), (135, 45781),

Gene: FelixAlejandro_55 Start: 48737, Stop: 48216, Start Num: 44

Candidate Starts for FelixAlejandro_55:

(Start: 44 @48737 has 63 MA's), (52, 48701), (133, 48287),

Gene: Flakey_50 Start: 47107, Stop: 46586, Start Num: 44

Candidate Starts for Flakey_50:

(Start: 44 @47107 has 63 MA's), (52, 47071), (135, 46645),

Gene: Fowlmouth_83 Start: 51110, Stop: 51577, Start Num: 46

Candidate Starts for Fowlmouth_83:

(Start: 46 @51110 has 21 MA's), (63, 51173), (66, 51182), (68, 51191), (88, 51278), (96, 51335), (116, 51416), (120, 51449), (121, 51458), (124, 51470),

Gene: FrankDeliGuy_53 Start: 42165, Stop: 41773, Start Num: 58

Candidate Starts for FrankDeliGuy_53:

(Start: 47 @42216 has 1 MA's), (Start: 57 @42168 has 10 MA's), (Start: 58 @42165 has 24 MA's), (71, 42126), (79, 42084), (92, 42003), (102, 41958), (140, 41781),

Gene: Fury_26 Start: 10463, Stop: 10972, Start Num: 26

Candidate Starts for Fury_26:

(Start: 26 @10463 has 2 MA's), (Start: 57 @10580 has 10 MA's), (64, 10595), (87, 10718), (90, 10727), (121, 10844), (124, 10856),

Gene: GMA7_42 Start: 41383, Stop: 40898, Start Num: 44

Candidate Starts for GMA7_42:

(Start: 44 @41383 has 63 MA's), (137, 40945),

Gene: GTE7_41 Start: 41414, Stop: 40929, Start Num: 44

Candidate Starts for GTE7_41:

(Start: 44 @41414 has 63 MA's), (137, 40976),

Gene: Gagieri_20 Start: 10423, Stop: 10938, Start Num: 45

Candidate Starts for Gagieri_20:

(7, 9913), (8, 9994), (19, 10129), (Start: 45 @10423 has 7 MA's), (61, 10486), (89, 10618), (91, 10630), (114, 10759), (122, 10816), (135, 10876),

Gene: GalacticEye_49 Start: 47504, Stop: 47001, Start Num: 44

Candidate Starts for GalacticEye_49:

(33, 47549), (36, 47531), (Start: 44 @47504 has 63 MA's), (56, 47444), (119, 47153), (128, 47099),

Gene: Gazebo_56 Start: 42670, Stop: 42278, Start Num: 58

Candidate Starts for Gazebo_56:

(Start: 57 @42673 has 10 MA's), (Start: 58 @42670 has 24 MA's), (71, 42628), (92, 42505), (101, 42460), (140, 42286), (141, 42283),

Gene: Gibbles_47 Start: 45170, Stop: 44748, Start Num: 48

Candidate Starts for Gibbles_47:

(Start: 48 @45170 has 5 MA's), (Start: 57 @45134 has 10 MA's), (70, 45095), (72, 45089), (76, 45074), (89, 44984), (124, 44855), (135, 44810), (140, 44756),

Gene: Gmala1_37 Start: 39458, Stop: 38919, Start Num: 31

Candidate Starts for Gmala1_37:

(28, 39467), (31, 39458), (37, 39425), (76, 39281), (79, 39257), (96, 39143), (133, 38987),

Gene: GordDuk1_37 Start: 39399, Stop: 38860, Start Num: 31

Candidate Starts for GordDuk1_37:

(28, 39408), (31, 39399), (37, 39366), (76, 39222), (79, 39198), (96, 39084), (133, 38928),

Gene: GordTnk2_37 Start: 39365, Stop: 38826, Start Num: 31

Candidate Starts for GordTnk2_37:

(28, 39374), (31, 39365), (37, 39332), (76, 39188), (79, 39164), (96, 39050), (133, 38894),

Gene: Gorko_50 Start: 46235, Stop: 45714, Start Num: 44

Candidate Starts for Gorko_50:

(Start: 44 @46235 has 63 MA's), (52, 46199), (135, 45773),

Gene: GourdThymes_50 Start: 47109, Stop: 46588, Start Num: 44

Candidate Starts for GourdThymes_50:

(Start: 44 @47109 has 63 MA's), (52, 47073), (74, 46989), (135, 46647),

Gene: Grassboy_59 Start: 43110, Stop: 42643, Start Num: 47

Candidate Starts for Grassboy_59:

(Start: 47 @43110 has 1 MA's), (Start: 57 @43062 has 10 MA's), (Start: 58 @43059 has 24 MA's), (71, 43020), (79, 42978), (92, 42897), (117, 42801), (140, 42651), (141, 42648),

Gene: Guillaume_49 Start: 47554, Stop: 47051, Start Num: 44

Candidate Starts for Guillaume_49:

(33, 47599), (36, 47581), (Start: 44 @47554 has 63 MA's), (56, 47494), (119, 47203), (128, 47149),

Gene: Hail2Pitt_48 Start: 48030, Stop: 47527, Start Num: 44

Candidate Starts for Hail2Pitt_48:

(33, 48075), (36, 48057), (Start: 44 @48030 has 63 MA's), (56, 47970), (119, 47679), (128, 47625),

Gene: Harambe_49 Start: 47821, Stop: 47318, Start Num: 44

Candidate Starts for Harambe_49:

(33, 47866), (36, 47848), (Start: 44 @47821 has 63 MA's), (56, 47761), (119, 47470), (128, 47416),

Gene: HayZem_52 Start: 47166, Stop: 46681, Start Num: 44

Candidate Starts for HayZem_52:

(Start: 44 @47166 has 63 MA's), (137, 46728),

Gene: Hello_49 Start: 47783, Stop: 47280, Start Num: 44

Candidate Starts for Hello_49:

(33, 47828), (36, 47810), (Start: 44 @47783 has 63 MA's), (56, 47723), (119, 47432), (128, 47378),

Gene: Hollow_46 Start: 47574, Stop: 47080, Start Num: 46

Candidate Starts for Hollow_46:

(Start: 46 @47574 has 21 MA's), (49, 47559), (55, 47532), (74, 47466), (100, 47283), (117, 47244), (123, 47196),

Gene: HomeFry_23 Start: 9368, Stop: 9835, Start Num: 38

Candidate Starts for HomeFry_23:

(6, 8822), (9, 8981), (12, 9017), (Start: 38 @9368 has 1 MA's), (50, 9413), (54, 9428), (Start: 57 @9443 has 10 MA's), (64, 9458), (77, 9509), (83, 9566), (87, 9581), (89, 9587), (121, 9707),

Gene: Hotorobo_50 Start: 47114, Stop: 46593, Start Num: 44

Candidate Starts for Hotorobo_50:

(Start: 44 @47114 has 63 MA's), (52, 47078), (135, 46652),

Gene: HubbaBubba_16 Start: 7112, Stop: 7570, Start Num: 41

Candidate Starts for HubbaBubba_16:

(13, 6758), (Start: 41 @7112 has 10 MA's), (54, 7160), (Start: 57 @7178 has 10 MA's), (64, 7193), (73, 7226), (83, 7301), (121, 7442), (140, 7562),

Gene: Hyperion_57 Start: 42845, Stop: 42456, Start Num: 58

Candidate Starts for Hyperion_57:

(42, 42914), (Start: 57 @42848 has 10 MA's), (Start: 58 @42845 has 24 MA's), (79, 42764), (92, 42683), (140, 42464),

Gene: IDyn_19 Start: 8503, Stop: 8961, Start Num: 41

Candidate Starts for IDyn_19:

(13, 8149), (Start: 41 @8503 has 10 MA's), (54, 8551), (Start: 57 @8569 has 10 MA's), (64, 8584), (73, 8617), (77, 8635), (83, 8692), (121, 8833),

Gene: Indlulamithi_73 Start: 51686, Stop: 52294, Start Num: 24

Candidate Starts for Indlulamithi_73:

(Start: 24 @51686 has 1 MA's), (25, 51707), (35, 51758), (Start: 46 @51800 has 21 MA's), (61, 51857), (76, 51911), (78, 51926), (81, 51947), (82, 51950), (85, 51974), (86, 51977), (117, 52136), (120, 52166), (125, 52190), (136, 52235), (140, 52286),

Gene: Jams_49 Start: 46993, Stop: 46490, Start Num: 44

Candidate Starts for Jams_49:

(33, 47038), (36, 47020), (Start: 44 @46993 has 63 MA's), (56, 46933), (119, 46642), (128, 46588),

Gene: Jehoshaphat_58 Start: 43108, Stop: 42716, Start Num: 57

Candidate Starts for Jehoshaphat_58:

(Start: 57 @43108 has 10 MA's), (Start: 58 @43105 has 24 MA's), (71, 43066), (92, 42943), (101, 42898), (140, 42724),

Gene: Jellybones_53 Start: 48215, Stop: 47694, Start Num: 44

Candidate Starts for Jellybones_53:

(Start: 44 @48215 has 63 MA's), (52, 48179), (133, 47765),

Gene: John316_54 Start: 48272, Stop: 47751, Start Num: 44

Candidate Starts for John316_54:

(Start: 44 @48272 has 63 MA's), (52, 48236), (135, 47810),

Gene: Jormungandr_49 Start: 47536, Stop: 47033, Start Num: 44

Candidate Starts for Jormungandr_49:

(33, 47581), (36, 47563), (Start: 44 @47536 has 63 MA's), (56, 47476), (119, 47185), (128, 47131),

Gene: Judebell_58 Start: 42554, Stop: 42165, Start Num: 58

Candidate Starts for Judebell_58:

(Start: 47 @42605 has 1 MA's), (Start: 57 @42557 has 10 MA's), (Start: 58 @42554 has 24 MA's), (71, 42515), (79, 42473), (92, 42392), (101, 42347), (140, 42173),

Gene: Jumbo_42 Start: 45467, Stop: 44925, Start Num: 39

Candidate Starts for Jumbo_42:

(23, 45563), (27, 45521), (31, 45509), (34, 45494), (Start: 39 @45467 has 1 MA's), (60, 45380), (89, 45239), (91, 45227), (103, 45140), (119, 45095), (120, 45083), (127, 45050), (134, 44993),

Gene: Kampe_49 Start: 45153, Stop: 44731, Start Num: 48
Candidate Starts for Kampe_49:
(Start: 48 @45153 has 5 MA's), (Start: 57 @45117 has 10 MA's), (70, 45078), (72, 45072), (76, 45057),
(89, 44967), (135, 44793),

Gene: Kaseim_49 Start: 46978, Stop: 46475, Start Num: 44
Candidate Starts for Kaseim_49:
(33, 47023), (36, 47005), (Start: 44 @46978 has 63 MA's), (56, 46918), (119, 46627), (128, 46573),

Gene: Katyusha_45 Start: 47238, Stop: 46744, Start Num: 46
Candidate Starts for Katyusha_45:
(Start: 46 @47238 has 21 MA's), (49, 47223), (55, 47196), (100, 46947), (115, 46917), (117, 46908),
(121, 46866), (123, 46860),

Gene: Kelzog_52 Start: 47121, Stop: 46600, Start Num: 44
Candidate Starts for Kelzog_52:
(Start: 44 @47121 has 63 MA's), (52, 47085), (135, 46659),

Gene: Kvothe_45 Start: 47137, Stop: 46643, Start Num: 46
Candidate Starts for Kvothe_45:
(Start: 46 @47137 has 21 MA's), (49, 47122), (55, 47095), (115, 46816), (117, 46807), (121, 46765),
(123, 46759),

Gene: Kyva_59 Start: 43089, Stop: 42700, Start Num: 58
Candidate Starts for Kyva_59:
(13, 43476), (22, 43245), (29, 43185), (30, 43182), (43, 43152), (Start: 57 @43092 has 10 MA's),
(Start: 58 @43089 has 24 MA's), (92, 42927), (101, 42882), (140, 42708), (141, 42705),

Gene: Labelle_102 Start: 64800, Stop: 65264, Start Num: 46
Candidate Starts for Labelle_102:
(Start: 46 @64800 has 21 MA's), (117, 65106), (120, 65136), (121, 65145), (127, 65166), (133, 65190),
(134, 65193),

Gene: Lahirium_49 Start: 48058, Stop: 47555, Start Num: 44
Candidate Starts for Lahirium_49:
(33, 48103), (36, 48085), (Start: 44 @48058 has 63 MA's), (56, 47998), (119, 47707), (128, 47653),

Gene: Leopard_104 Start: 67266, Stop: 67778, Start Num: 46
Candidate Starts for Leopard_104:
(Start: 46 @67266 has 21 MA's), (53, 67293), (75, 67374), (84, 67425), (85, 67434), (88, 67443), (89,
67446), (95, 67497), (96, 67500), (99, 67566), (100, 67569), (105, 67581), (108, 67584), (110, 67590),
(113, 67599),

Gene: Lidong_49 Start: 47793, Stop: 47290, Start Num: 44
Candidate Starts for Lidong_49:
(33, 47838), (36, 47820), (Start: 44 @47793 has 63 MA's), (56, 47733), (119, 47442), (128, 47388),

Gene: Linetti_52 Start: 48032, Stop: 47523, Start Num: 44
Candidate Starts for Linetti_52:
(Start: 44 @48032 has 63 MA's), (52, 47996), (135, 47582),

Gene: Lizzo_50 Start: 47103, Stop: 46582, Start Num: 44
Candidate Starts for Lizzo_50:

(Start: 44 @47103 has 63 MA's), (52, 47067), (135, 46641),

Gene: Llemily_56 Start: 41881, Stop: 41492, Start Num: 58

Candidate Starts for Llemily_56:

(Start: 57 @41884 has 10 MA's), (Start: 58 @41881 has 24 MA's), (71, 41842), (92, 41719), (101, 41674), (140, 41500),

Gene: Lonelysoil_55 Start: 42037, Stop: 41648, Start Num: 58

Candidate Starts for Lonelysoil_55:

(Start: 47 @42088 has 1 MA's), (Start: 57 @42040 has 10 MA's), (Start: 58 @42037 has 24 MA's), (71, 41998), (79, 41956), (92, 41875), (101, 41830), (140, 41656),

Gene: Luker_50 Start: 48011, Stop: 47508, Start Num: 44

Candidate Starts for Luker_50:

(33, 48056), (36, 48038), (Start: 44 @48011 has 63 MA's), (56, 47951), (119, 47660), (128, 47606),

Gene: MacGully_24 Start: 10356, Stop: 10865, Start Num: 45

Candidate Starts for MacGully_24:

(5, 9750), (19, 10098), (20, 10137), (Start: 45 @10356 has 7 MA's), (89, 10551), (111, 10677), (118, 10704), (132, 10785), (137, 10815),

Gene: Madruga_101 Start: 64424, Stop: 64888, Start Num: 46

Candidate Starts for Madruga_101:

(Start: 46 @64424 has 21 MA's), (117, 64730), (120, 64760), (121, 64769), (127, 64790), (130, 64802), (133, 64814), (134, 64817),

Gene: Marietta_20 Start: 8429, Stop: 8887, Start Num: 41

Candidate Starts for Marietta_20:

(13, 8075), (Start: 41 @8429 has 10 MA's), (54, 8477), (Start: 57 @8495 has 10 MA's), (64, 8510), (73, 8543), (77, 8561), (83, 8618), (140, 8879),

Gene: Maselop_21 Start: 10882, Stop: 11397, Start Num: 45

Candidate Starts for Maselop_21:

(2, 10120), (7, 10372), (19, 10588), (32, 10831), (Start: 45 @10882 has 7 MA's), (55, 10927), (61, 10945), (73, 10981), (89, 11077), (112, 11212), (122, 11275), (135, 11335),

Gene: Mashley_56 Start: 42624, Stop: 42232, Start Num: 58

Candidate Starts for Mashley_56:

(21, 42828), (42, 42693), (Start: 57 @42627 has 10 MA's), (Start: 58 @42624 has 24 MA's), (71, 42582), (79, 42540), (92, 42459), (101, 42414), (140, 42240),

Gene: Mentos_61 Start: 43855, Stop: 43466, Start Num: 58

Candidate Starts for Mentos_61:

(13, 44245), (14, 44242), (22, 44011), (29, 43951), (30, 43948), (43, 43918), (Start: 57 @43858 has 10 MA's), (Start: 58 @43855 has 24 MA's), (92, 43693), (138, 43513), (140, 43474),

Gene: Mila11_60 Start: 44086, Stop: 43688, Start Num: 57

Candidate Starts for Mila11_60:

(42, 44152), (Start: 57 @44086 has 10 MA's), (Start: 58 @44083 has 24 MA's), (92, 43921), (138, 43735), (140, 43696), (141, 43693),

Gene: Minos_50 Start: 47535, Stop: 47032, Start Num: 44

Candidate Starts for Minos_50:

(33, 47580), (36, 47562), (Start: 44 @47535 has 63 MA's), (56, 47475), (119, 47184), (128, 47130),

Gene: Monty_49 Start: 46253, Stop: 45732, Start Num: 44

Candidate Starts for Monty_49:

(Start: 44 @46253 has 63 MA's), (52, 46217), (135, 45791),

Gene: MorillMayhem_58 Start: 42963, Stop: 42565, Start Num: 57

Candidate Starts for MorillMayhem_58:

(42, 43029), (Start: 57 @42963 has 10 MA's), (Start: 58 @42960 has 24 MA's), (92, 42798), (138, 42612), (140, 42573), (141, 42570),

Gene: MrMiyagi_81 Start: 51354, Stop: 51842, Start Num: 46

Candidate Starts for MrMiyagi_81:

(40, 51333), (Start: 46 @51354 has 21 MA's), (51, 51372), (71, 51447), (80, 51495), (84, 51525), (91, 51558), (104, 51654), (105, 51657), (109, 51660), (120, 51714), (124, 51735),

Gene: MrWormie_49 Start: 46696, Stop: 46193, Start Num: 44

Candidate Starts for MrWormie_49:

(33, 46741), (36, 46723), (Start: 44 @46696 has 63 MA's), (56, 46636), (119, 46345), (128, 46291),

Gene: Msay19_55 Start: 48726, Stop: 48205, Start Num: 44

Candidate Starts for Msay19_55:

(Start: 44 @48726 has 63 MA's), (52, 48690), (133, 48276),

Gene: NadineRae_18 Start: 7679, Stop: 8137, Start Num: 41

Candidate Starts for NadineRae_18:

(13, 7325), (Start: 41 @7679 has 10 MA's), (54, 7727), (Start: 57 @7745 has 10 MA's), (64, 7760), (73, 7793), (77, 7811), (83, 7868), (88, 7886), (121, 8009), (140, 8129),

Gene: Namago_57 Start: 42027, Stop: 41638, Start Num: 58

Candidate Starts for Namago_57:

(Start: 47 @42078 has 1 MA's), (Start: 57 @42030 has 10 MA's), (Start: 58 @42027 has 24 MA's), (71, 41988), (79, 41946), (92, 41865), (101, 41820), (140, 41646), (141, 41643),

Gene: Neoevie_49 Start: 47797, Stop: 47294, Start Num: 44

Candidate Starts for Neoevie_49:

(33, 47842), (36, 47824), (Start: 44 @47797 has 63 MA's), (56, 47737), (119, 47446), (128, 47392),

Gene: Newt_50 Start: 48025, Stop: 47522, Start Num: 44

Candidate Starts for Newt_50:

(33, 48070), (36, 48052), (Start: 44 @48025 has 63 MA's), (56, 47965), (119, 47674), (128, 47620),

Gene: Niagara_45 Start: 47216, Stop: 46722, Start Num: 46

Candidate Starts for Niagara_45:

(Start: 46 @47216 has 21 MA's), (49, 47201), (55, 47174), (115, 46895), (117, 46886), (121, 46844), (123, 46838),

Gene: Nike_59 Start: 43351, Stop: 42950, Start Num: 57

Candidate Starts for Nike_59:

(Start: 57 @43351 has 10 MA's), (Start: 58 @43348 has 24 MA's), (62, 43336), (79, 43264), (92, 43183), (121, 43069), (140, 42958),

Gene: Nimi13_49 Start: 47544, Stop: 47041, Start Num: 44

Candidate Starts for Nimi13_49:

(33, 47589), (36, 47571), (Start: 44 @47544 has 63 MA's), (56, 47484), (119, 47193), (128, 47139),

Gene: Onyinye_105 Start: 67128, Stop: 67658, Start Num: 46

Candidate Starts for Onyinye_105:

(Start: 46 @67128 has 21 MA's), (53, 67155), (63, 67194), (69, 67215), (75, 67236), (84, 67287), (85, 67296), (88, 67305), (89, 67308), (91, 67320), (95, 67359), (96, 67362), (99, 67428), (100, 67431), (105, 67443), (106, 67446), (107, 67458), (108, 67461), (110, 67467), (113, 67479),

Gene: Orchid_48 Start: 45154, Stop: 44732, Start Num: 48

Candidate Starts for Orchid_48:

(Start: 48 @45154 has 5 MA's), (Start: 57 @45118 has 10 MA's), (70, 45079), (72, 45073), (76, 45058), (89, 44968), (135, 44794),

Gene: Patience_103 Start: 65328, Stop: 65792, Start Num: 46

Candidate Starts for Patience_103:

(Start: 46 @65328 has 21 MA's), (117, 65634), (120, 65664), (121, 65673), (127, 65694), (130, 65706), (133, 65718), (134, 65721),

Gene: PatrickStar_49 Start: 45153, Stop: 44731, Start Num: 48

Candidate Starts for PatrickStar_49:

(Start: 48 @45153 has 5 MA's), (Start: 57 @45117 has 10 MA's), (70, 45078), (72, 45072), (76, 45057), (89, 44967), (135, 44793),

Gene: Pemberton_21 Start: 8397, Stop: 8855, Start Num: 41

Candidate Starts for Pemberton_21:

(13, 8043), (Start: 41 @8397 has 10 MA's), (54, 8445), (Start: 57 @8463 has 10 MA's), (64, 8478), (73, 8511), (83, 8586), (121, 8727),

Gene: Phabia_56 Start: 42299, Stop: 41907, Start Num: 57

Candidate Starts for Phabia_56:

(Start: 57 @42299 has 10 MA's), (Start: 58 @42296 has 24 MA's), (71, 42257), (92, 42134), (101, 42089), (140, 41915),

Gene: Philon9_47 Start: 48247, Stop: 47753, Start Num: 46

Candidate Starts for Philon9_47:

(Start: 46 @48247 has 21 MA's), (59, 48193), (74, 48139), (91, 48037), (117, 47917),

Gene: PierreThree_51 Start: 47781, Stop: 47260, Start Num: 44

Candidate Starts for PierreThree_51:

(Start: 44 @47781 has 63 MA's), (52, 47745), (97, 47487), (135, 47319),

Gene: Pleakley_26 Start: 10464, Stop: 10973, Start Num: 26

Candidate Starts for Pleakley_26:

(Start: 26 @10464 has 2 MA's), (Start: 57 @10581 has 10 MA's), (64, 10596), (87, 10719), (90, 10728), (121, 10845), (124, 10857),

Gene: PokyPuppy_50 Start: 47715, Stop: 47209, Start Num: 44

Candidate Starts for PokyPuppy_50:

(Start: 44 @47715 has 63 MA's), (52, 47679), (74, 47595), (135, 47268), (137, 47256),

Gene: Poland_55 Start: 48705, Stop: 48184, Start Num: 44

Candidate Starts for Poland_55:

(Start: 44 @48705 has 63 MA's), (52, 48669), (133, 48255),

Gene: Polyuyki_21 Start: 10892, Stop: 11374, Start Num: 45

Candidate Starts for Polyuyki_21:

(2, 10130), (7, 10382), (19, 10598), (32, 10841), (Start: 45 @10892 has 7 MA's), (55, 10937), (61, 10955), (73, 10991), (89, 11087), (94, 11132), (116, 11207), (122, 11252), (135, 11312),

Gene: Quammi_54 Start: 41996, Stop: 41607, Start Num: 58

Candidate Starts for Quammi_54:

(Start: 57 @41999 has 10 MA's), (Start: 58 @41996 has 24 MA's), (71, 41957), (92, 41834), (101, 41789), (140, 41615),

Gene: RemRem_51 Start: 46243, Stop: 45722, Start Num: 44

Candidate Starts for RemRem_51:

(Start: 44 @46243 has 63 MA's), (52, 46207), (135, 45781),

Gene: RobinSparkles_52 Start: 45706, Stop: 45284, Start Num: 48

Candidate Starts for RobinSparkles_52:

(Start: 48 @45706 has 5 MA's), (Start: 57 @45670 has 10 MA's), (70, 45631), (72, 45625), (76, 45610), (89, 45520), (135, 45346),

Gene: Rowlf_53 Start: 41900, Stop: 41508, Start Num: 58

Candidate Starts for Rowlf_53:

(42, 41969), (Start: 57 @41903 has 10 MA's), (Start: 58 @41900 has 24 MA's), (71, 41858), (92, 41735), (138, 41555), (140, 41516),

Gene: RoyalG_51 Start: 47075, Stop: 46554, Start Num: 44

Candidate Starts for RoyalG_51:

(Start: 44 @47075 has 63 MA's), (52, 47039), (128, 46652), (131, 46637), (137, 46601),

Gene: Rudy_54 Start: 42035, Stop: 41643, Start Num: 57

Candidate Starts for Rudy_54:

(Start: 57 @42035 has 10 MA's), (Start: 58 @42032 has 24 MA's), (71, 41993), (92, 41870), (101, 41825), (140, 41651),

Gene: SallyK_58 Start: 43182, Stop: 42760, Start Num: 57

Candidate Starts for SallyK_58:

(Start: 57 @43182 has 10 MA's), (Start: 58 @43179 has 24 MA's), (71, 43137), (79, 43095), (92, 43014), (117, 42918), (140, 42768),

Gene: Sam12_50 Start: 46243, Stop: 45722, Start Num: 44

Candidate Starts for Sam12_50:

(Start: 44 @46243 has 63 MA's), (52, 46207), (135, 45781),

Gene: Scuba_26 Start: 10550, Stop: 11059, Start Num: 26

Candidate Starts for Scuba_26:

(Start: 26 @10550 has 2 MA's), (Start: 57 @10667 has 10 MA's), (64, 10682), (65, 10685), (87, 10805), (90, 10814), (121, 10931), (124, 10943), (126, 10952),

Gene: Shelley_49 Start: 47020, Stop: 46517, Start Num: 44

Candidate Starts for Shelley_49:

(33, 47065), (36, 47047), (Start: 44 @47020 has 63 MA's), (56, 46960), (119, 46669), (128, 46615),

Gene: Sillytadpoles_57 Start: 41869, Stop: 41480, Start Num: 58
Candidate Starts for Sillytadpoles_57:
(Start: 57 @41872 has 10 MA's), (Start: 58 @41869 has 24 MA's), (71, 41830), (92, 41707), (101, 41662), (140, 41488),

Gene: SlySloth_59 Start: 42544, Stop: 42152, Start Num: 58
Candidate Starts for SlySloth_59:
(Start: 57 @42547 has 10 MA's), (Start: 58 @42544 has 24 MA's), (71, 42502), (79, 42460), (92, 42379), (101, 42334), (140, 42160),

Gene: Sombrero_51 Start: 46616, Stop: 46095, Start Num: 44
Candidate Starts for Sombrero_51:
(Start: 44 @46616 has 63 MA's), (52, 46580), (133, 46166),

Gene: Squash_61 Start: 43540, Stop: 43148, Start Num: 58
Candidate Starts for Squash_61:
(42, 43609), (Start: 57 @43543 has 10 MA's), (Start: 58 @43540 has 24 MA's), (71, 43498), (79, 43456), (92, 43375), (101, 43330),

Gene: Squibbles_50 Start: 47106, Stop: 46585, Start Num: 44
Candidate Starts for Squibbles_50:
(Start: 44 @47106 has 63 MA's), (135, 46644),

Gene: Statler_58 Start: 42622, Stop: 42227, Start Num: 57
Candidate Starts for Statler_58:
(42, 42688), (Start: 57 @42622 has 10 MA's), (Start: 58 @42619 has 24 MA's), (71, 42577), (79, 42535), (92, 42454), (101, 42409), (140, 42235),

Gene: SteveFrench_50 Start: 47315, Stop: 46794, Start Num: 44
Candidate Starts for SteveFrench_50:
(Start: 44 @47315 has 63 MA's), (52, 47279), (128, 46892), (131, 46877), (137, 46841),

Gene: Sticker17_49 Start: 47535, Stop: 47032, Start Num: 44
Candidate Starts for Sticker17_49:
(33, 47580), (36, 47562), (Start: 44 @47535 has 63 MA's), (56, 47475), (119, 47184), (128, 47130),

Gene: StrawberryJamm_60 Start: 42333, Stop: 41941, Start Num: 58
Candidate Starts for StrawberryJamm_60:
(Start: 57 @42336 has 10 MA's), (Start: 58 @42333 has 24 MA's), (71, 42291), (79, 42249), (92, 42168), (101, 42123), (140, 41949), (141, 41946),

Gene: Sukkupi_20 Start: 8477, Stop: 8935, Start Num: 41
Candidate Starts for Sukkupi_20:
(3, 7778), (13, 8123), (Start: 41 @8477 has 10 MA's), (54, 8525), (Start: 57 @8543 has 10 MA's), (64, 8558), (73, 8591), (83, 8666), (86, 8678), (121, 8807),

Gene: SuperSonics_109 Start: 64383, Stop: 64847, Start Num: 46
Candidate Starts for SuperSonics_109:
(Start: 46 @64383 has 21 MA's), (117, 64689), (120, 64719), (121, 64728), (127, 64749), (133, 64773), (134, 64776),

Gene: Teal_49 Start: 48002, Stop: 47499, Start Num: 44
Candidate Starts for Teal_49:

(33, 48047), (36, 48029), (Start: 44 @48002 has 63 MA's), (56, 47942), (119, 47651), (128, 47597),

Gene: Teatealatte_46 Start: 47140, Stop: 46646, Start Num: 46

Candidate Starts for Teatealatte_46:

(Start: 46 @47140 has 21 MA's), (49, 47125), (55, 47098), (115, 46819), (117, 46810), (121, 46768), (123, 46762),

Gene: Teech_46 Start: 46941, Stop: 46447, Start Num: 46

Candidate Starts for Teech_46:

(Start: 46 @46941 has 21 MA's), (49, 46926), (55, 46899), (115, 46620), (117, 46611), (121, 46569), (123, 46563),

Gene: Teehee_57 Start: 43102, Stop: 42713, Start Num: 58

Candidate Starts for Teehee_57:

(Start: 57 @43105 has 10 MA's), (Start: 58 @43102 has 24 MA's), (71, 43063), (92, 42940), (101, 42895), (140, 42721),

Gene: Tissue_58 Start: 42946, Stop: 42539, Start Num: 58

Candidate Starts for Tissue_58:

(13, 43333), (14, 43330), (22, 43102), (29, 43042), (30, 43039), (43, 43009), (Start: 57 @42949 has 10 MA's), (Start: 58 @42946 has 24 MA's), (92, 42784), (140, 42547), (141, 42544),

Gene: Tredge_46 Start: 47140, Stop: 46646, Start Num: 46

Candidate Starts for Tredge_46:

(Start: 46 @47140 has 21 MA's), (49, 47125), (55, 47098), (115, 46819), (117, 46810), (121, 46768), (123, 46762),

Gene: Viceroy_55 Start: 42002, Stop: 41613, Start Num: 58

Candidate Starts for Viceroy_55:

(Start: 57 @42005 has 10 MA's), (Start: 58 @42002 has 24 MA's), (71, 41963), (92, 41840), (101, 41795), (140, 41621),

Gene: Vitaenoi_47 Start: 48246, Stop: 47752, Start Num: 46

Candidate Starts for Vitaenoi_47:

(Start: 46 @48246 has 21 MA's), (59, 48192), (74, 48138), (91, 48036), (117, 47916),

Gene: Wayne3_58 Start: 42865, Stop: 42476, Start Num: 58

Candidate Starts for Wayne3_58:

(Start: 57 @42868 has 10 MA's), (Start: 58 @42865 has 24 MA's), (71, 42826), (92, 42703), (101, 42658), (140, 42484),

Gene: WheelerS25_64 Start: 44030, Stop: 43635, Start Num: 57

Candidate Starts for WheelerS25_64:

(Start: 57 @44030 has 10 MA's), (Start: 58 @44027 has 24 MA's), (71, 43985), (92, 43862), (138, 43682), (140, 43643),

Gene: Wheelie_56 Start: 42186, Stop: 41797, Start Num: 58

Candidate Starts for Wheelie_56:

(Start: 57 @42189 has 10 MA's), (Start: 58 @42186 has 24 MA's), (71, 42147), (92, 42024), (101, 41979), (140, 41805),

Gene: WhoseManz_20 Start: 8040, Stop: 8498, Start Num: 41

Candidate Starts for WhoseManz_20:

(13, 7686), (Start: 41 @8040 has 10 MA's), (54, 8088), (Start: 57 @8106 has 10 MA's), (64, 8121), (73, 8154), (77, 8172), (83, 8229), (140, 8490),

Gene: Woes_49 Start: 48053, Stop: 47550, Start Num: 44

Candidate Starts for Woes_49:

(33, 48098), (36, 48080), (Start: 44 @48053 has 63 MA's), (56, 47993), (119, 47702), (128, 47648),

Gene: Worcestershire_51 Start: 46245, Stop: 45724, Start Num: 44

Candidate Starts for Worcestershire_51:

(Start: 44 @46245 has 63 MA's), (52, 46209), (74, 46125), (135, 45783),

Gene: Yndexa_20 Start: 8477, Stop: 8935, Start Num: 41

Candidate Starts for Yndexa_20:

(3, 7778), (13, 8123), (Start: 41 @8477 has 10 MA's), (54, 8525), (Start: 57 @8543 has 10 MA's), (64, 8558), (73, 8591), (83, 8666), (86, 8678), (121, 8807),

Gene: Zagie_57 Start: 42527, Stop: 42138, Start Num: 58

Candidate Starts for Zagie_57:

(Start: 47 @42578 has 1 MA's), (Start: 57 @42530 has 10 MA's), (Start: 58 @42527 has 24 MA's), (71, 42488), (79, 42446), (92, 42365), (101, 42320), (140, 42146),

Gene: Zhafia_59 Start: 42666, Stop: 42277, Start Num: 58

Candidate Starts for Zhafia_59:

(Start: 57 @42669 has 10 MA's), (Start: 58 @42666 has 24 MA's), (71, 42627), (92, 42504), (101, 42459), (140, 42285),