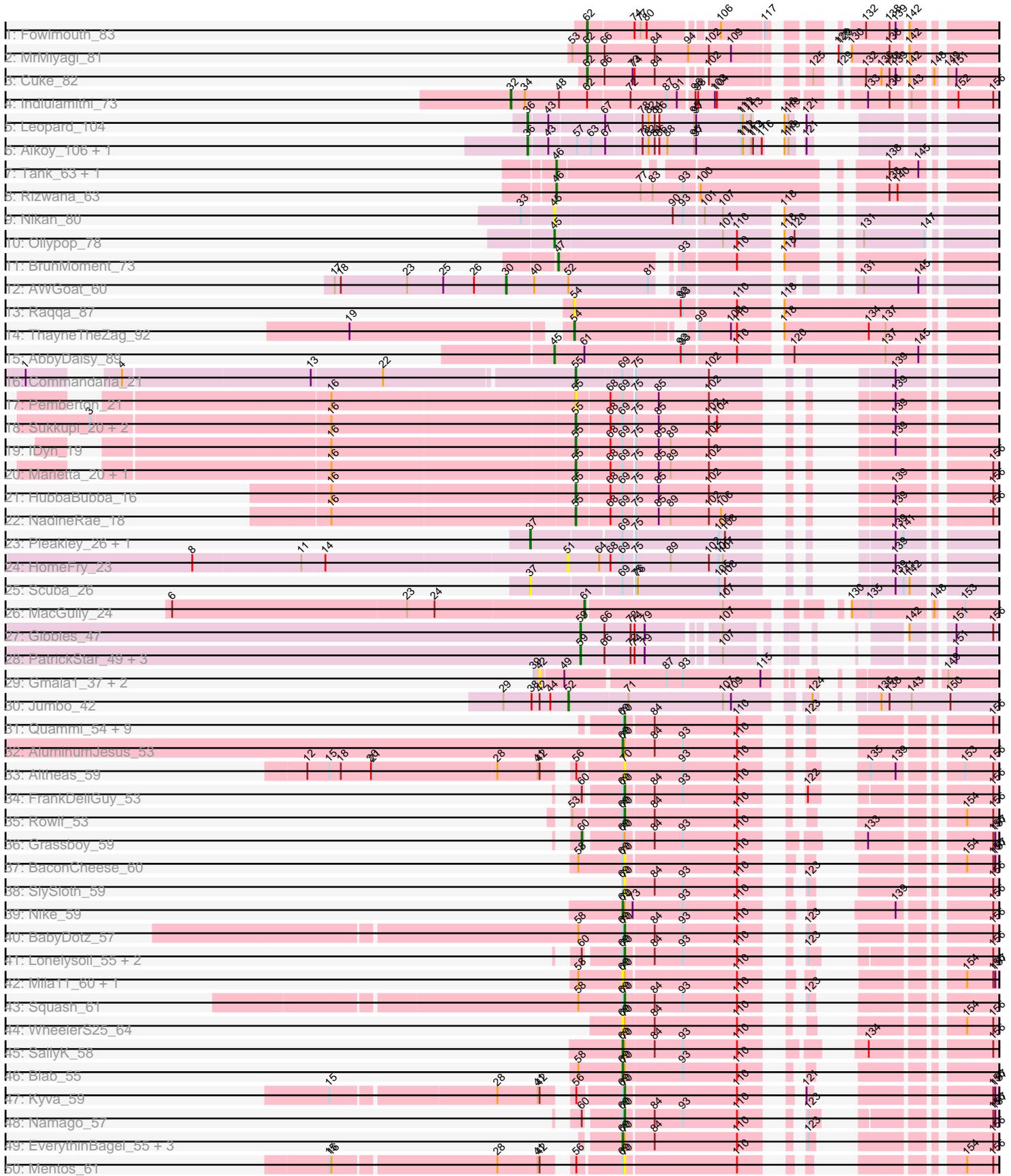
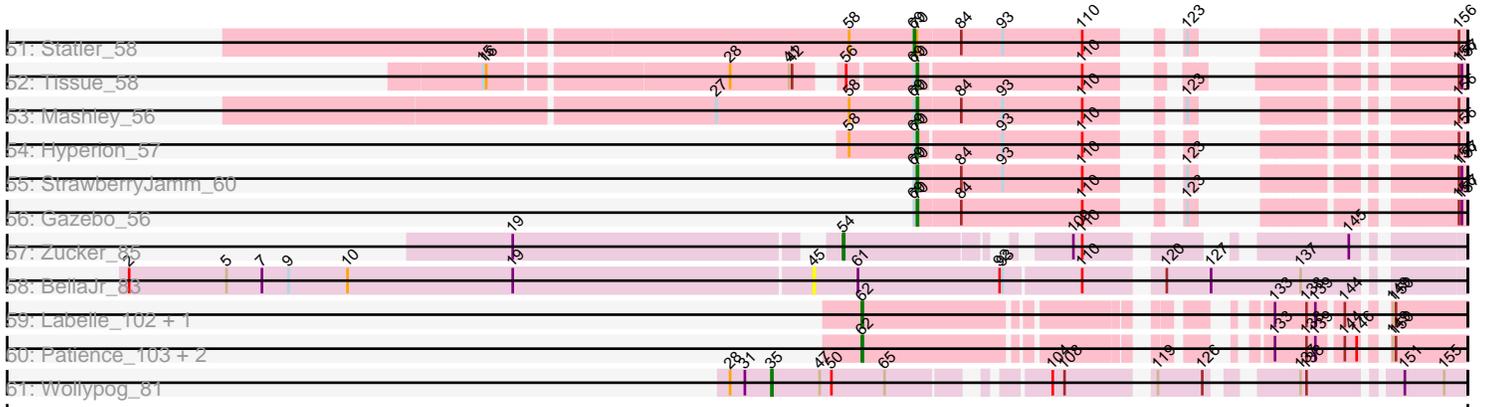


Pham 291046



Pham 291046



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 291046 Report

This analysis was run 03/28/26 on database version 641.

Pham number 291046 has 90 members, 18 are drafts.

Phages represented in each track:

- Track 1 : Fowlmouth_83
- Track 2 : MrMiyagi_81
- Track 3 : Cuke_82
- Track 4 : Indlulamithi_73
- Track 5 : Leopard_104
- Track 6 : Aikoy_106, Onyinye_105
- Track 7 : Tank_63, Wilde_65
- Track 8 : Rizwana_63
- Track 9 : Nikan_80
- Track 10 : Ollypop_78
- Track 11 : BruhMoment_73
- Track 12 : AWGoat_60
- Track 13 : Raqqa_87
- Track 14 : ThayneTheZag_92
- Track 15 : AbbyDaisy_89
- Track 16 : Commandaria_21
- Track 17 : Pemberton_21
- Track 18 : Sukkupi_20, BiPauneto_21, Yndexa_20
- Track 19 : IDyn_19
- Track 20 : Marietta_20, WhoseManz_20
- Track 21 : HubbaBubba_16
- Track 22 : NadineRae_18
- Track 23 : Pleakley_26, Fury_26
- Track 24 : HomeFry_23
- Track 25 : Scuba_26
- Track 26 : MacGully_24
- Track 27 : Gibbles_47
- Track 28 : PatrickStar_49, RobinSparkles_52, Kampe_49, Orchid_48
- Track 29 : Gmala1_37, GordDuk1_37, GordTnk2_37
- Track 30 : Jumbo_42
- Track 31 : Quammi_54, Wheelie_56, Casend_57, Llemily_56, Sillytadpoles_57, DonaldDuck_56, Viceroy_55, Zhafia_59, Wayne3_58, Teehee_57
- Track 32 : AluminumJesus_53
- Track 33 : Altheas_59
- Track 34 : FrankDeliGuy_53
- Track 35 : Rowlf_53
- Track 36 : Grassboy_59

- Track 37 : BaconCheese_60
- Track 38 : SlySloth_59
- Track 39 : Nike_59
- Track 40 : BabyDotz_57
- Track 41 : Lonelysoil_55, Zagie_57, Judebell_58
- Track 42 : Mila11_60, MorillMayhem_58
- Track 43 : Squash_61
- Track 44 : WheelerS25_64
- Track 45 : SallyK_58
- Track 46 : Blab_55
- Track 47 : Kyva_59
- Track 48 : Namago_57
- Track 49 : EverythinBagel_55, Jehoshaphat_58, Rudy_54, Phabia_56
- Track 50 : Mentos_61
- Track 51 : Statler_58
- Track 52 : Tissue_58
- Track 53 : Mashley_56
- Track 54 : Hyperion_57
- Track 55 : StrawberryJamm_60
- Track 56 : Gazebo_56
- Track 57 : Zucker_85
- Track 58 : BellaJr_83
- Track 59 : Labelle_102, SuperSonics_109
- Track 60 : Patience_103, Madruga_101, Demikore_104
- Track 61 : Wollypog_81

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

The start number called the most often in the published annotations is 70, it was called in 24 of the 72 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Altheas_59, BabyDotz_57, BaconCheese_60, Casend_57, DonaldDuck_56, FrankDeliGuy_53, Gazebo_56, Hyperion_57, Judebell_58, Kyva_59, Llemily_56, Lonelysoil_55, Mashley_56, Mentos_61, Namago_57, Quammi_54, Rowlf_53, Sillytadpoles_57, SlySloth_59, Squash_61, StrawberryJamm_60, Teehee_57, Tissue_58, Viceroy_55, Wayne3_58, Wheelie_56, Zagie_57, Zhafia_59,

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

- AluminumJesus_53, Blab_55, EverythinBagel_55, Grassboy_59, Jehoshaphat_58, Mila11_60, MorillMayhem_58, Nike_59, Phabia_56, Rudy_54, SallyK_58, Statler_58, WheelerS25_64,

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

- AWGoat_60, AbbyDaisy_89, Aikoy_106, BellaJr_83, BiPauneto_21, BruhMoment_73, Commandaria_21, Cuke_82, Demikore_104, Fowlmouth_83, Fury_26, Gibbles_47, Gmala1_37, GordDuk1_37, GordTnk2_37, HomeFry_23, HubbaBubba_16, IDyn_19, Indlulamithi_73, Jumbo_42, Kampe_49, Labelle_102, Leopard_104, MacGully_24, Madruga_101, Marietta_20, MrMiyagi_81, NadineRae_18, Nikan_80, Ollypop_78, Onyinye_105, Orchid_48, Patience_103,

PatrickStar_49, Pemberton_21, Pleakley_26, Raqqa_87, Rizwana_63, RobinSparkles_52, Scuba_26, Sukkupi_20, SuperSonics_109, Tank_63, ThayneTheZag_92, WhoseManz_20, Wilde_65, Wollypog_81, Yndexa_20, Zucker_85,

Summary by start number:

Start 30:

- Found in 1 of 90 (1.1%) of genes in pham
- Manual Annotations of this start: 1 of 72
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AWGoat_60 (AP4),

Start 32:

- Found in 1 of 90 (1.1%) of genes in pham
- Manual Annotations of this start: 1 of 72
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Indlulamithi_73 (AC),

Start 35:

- Found in 1 of 90 (1.1%) of genes in pham
- Manual Annotations of this start: 1 of 72
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Wollypog_81 (singleton),

Start 36:

- Found in 3 of 90 (3.3%) of genes in pham
- Manual Annotations of this start: 3 of 72
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aikoy_106 (AE), Leopard_104 (AE), Onyinye_105 (AE),

Start 37:

- Found in 3 of 90 (3.3%) of genes in pham
- Manual Annotations of this start: 2 of 72
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Fury_26 (CR5), Pleakley_26 (CR5), Scuba_26 (CR5),

Start 42:

- Found in 8 of 90 (8.9%) of genes in pham
- No Manual Annotations of this start.
- Called 37.5% of time when present
- Phage (with cluster) where this start called: Gmala1_37 (DF1), GordDuk1_37 (DF1), GordTnk2_37 (DF1),

Start 45:

- Found in 4 of 90 (4.4%) of genes in pham
- Manual Annotations of this start: 2 of 72
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AbbyDaisy_89 (AY), BellaJr_83 (FN), Nikan_80 (AP2), Ollypop_78 (AP2),

Start 46:

- Found in 3 of 90 (3.3%) of genes in pham
- Manual Annotations of this start: 3 of 72
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Rizwana_63 (AP1), Tank_63 (AP1), Wilde_65 (AP1),

Start 47:

- Found in 2 of 90 (2.2%) of genes in pham
- Manual Annotations of this start: 1 of 72
- Called 50.0% of time when present
- Phage (with cluster) where this start called: BruhMoment_73 (AP3),

Start 51:

- Found in 1 of 90 (1.1%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: HomeFry_23 (CR5),

Start 52:

- Found in 2 of 90 (2.2%) of genes in pham
- Manual Annotations of this start: 1 of 72
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Jumbo_42 (DF3),

Start 54:

- Found in 3 of 90 (3.3%) of genes in pham
- Manual Annotations of this start: 2 of 72
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Raqqa_87 (AY), ThayneTheZag_92 (AY), Zucker_85 (FN),

Start 55:

- Found in 10 of 90 (11.1%) of genes in pham
- Manual Annotations of this start: 9 of 72
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BiPauneto_21 (CR4), 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 59:

- Found in 5 of 90 (5.6%) of genes in pham
- Manual Annotations of this start: 5 of 72
- 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 60:

- Found in 6 of 90 (6.7%) of genes in pham
- Manual Annotations of this start: 1 of 72
- Called 16.7% of time when present
- Phage (with cluster) where this start called: Grassboy_59 (EG),

Start 61:

- Found in 3 of 90 (3.3%) of genes in pham
- Manual Annotations of this start: 1 of 72
- Called 33.3% of time when present
- Phage (with cluster) where this start called: MacGully_24 (CR7),

Start 62:

- Found in 9 of 90 (10.0%) of genes in pham
- Manual Annotations of this start: 6 of 72
- Called 88.9% of time when present
- Phage (with cluster) where this start called: Cuke_82 (AC), Demikore_104 (U), Fowlmouth_83 (AC), Labelle_102 (U), Madrugua_101 (U), MrMiyagi_81 (AC), Patience_103 (U), SuperSonics_109 (U),

Start 69:

- Found in 54 of 90 (60.0%) of genes in pham
- Manual Annotations of this start: 9 of 72
- Called 22.2% 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 70:

- Found in 41 of 90 (45.6%) of genes in pham
- Manual Annotations of this start: 24 of 72
- 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), Quammi_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 18 clusters represented in this pham: CR2, AC, AE, CR7, CR4, CR5, AP2, AP3, EG, AP1, DF1, singleton, DF3, CX, U, AP4, AY, FN,

Info for manual annotations of cluster AC:

- Start number 32 was manually annotated 1 time for cluster AC.
- Start number 62 was manually annotated 3 times for cluster AC.

Info for manual annotations of cluster AE:

- Start number 36 was manually annotated 3 times for cluster AE.

Info for manual annotations of cluster AP1:

- Start number 46 was manually annotated 3 times for cluster AP1.

Info for manual annotations of cluster AP2:

- Start number 45 was manually annotated 1 time for cluster AP2.

Info for manual annotations of cluster AP3:

- Start number 47 was manually annotated 1 time for cluster AP3.

Info for manual annotations of cluster AP4:

- Start number 30 was manually annotated 1 time for cluster AP4.

Info for manual annotations of cluster AY:

- Start number 45 was manually annotated 1 time for cluster AY.
- Start number 54 was manually annotated 1 time for cluster AY.

Info for manual annotations of cluster CR2:

- Start number 55 was manually annotated 1 time for cluster CR2.

Info for manual annotations of cluster CR4:

- Start number 55 was manually annotated 8 times for cluster CR4.

Info for manual annotations of cluster CR5:

- Start number 37 was manually annotated 2 times for cluster CR5.

Info for manual annotations of cluster CR7:

- Start number 61 was manually annotated 1 time for cluster CR7.

Info for manual annotations of cluster CX:

- Start number 59 was manually annotated 5 times for cluster CX.

Info for manual annotations of cluster DF3:

- Start number 52 was manually annotated 1 time for cluster DF3.

Info for manual annotations of cluster EG:

- Start number 60 was manually annotated 1 time for cluster EG.
- Start number 69 was manually annotated 9 times for cluster EG.
- Start number 70 was manually annotated 24 times for cluster EG.

Info for manual annotations of cluster FN:

- Start number 54 was manually annotated 1 time for cluster FN.

Info for manual annotations of cluster U:

- Start number 62 was manually annotated 3 times for cluster U.

Gene Information:

Gene: AWGoat_60 Start: 44171, Stop: 43587, Start Num: 30

Candidate Starts for AWGoat_60:

(17, 44426), (18, 44417), (23, 44318), (25, 44264), (26, 44219), (Start: 30 @44171 has 1 MA's), (40, 44129), (Start: 52 @44078 has 1 MA's), (81, 43961), (131, 43760), (145, 43682),

Gene: AbbyDaisy_89 Start: 50820, Stop: 51422, Start Num: 45

Candidate Starts for AbbyDaisy_89:

(Start: 45 @50820 has 2 MA's), (Start: 61 @50865 has 1 MA's), (92, 51009), (93, 51012), (110, 51087), (120, 51150), (137, 51285), (145, 51333),

Gene: Aikoy_106 Start: 67335, Stop: 67865, Start Num: 36

Candidate Starts for Aikoy_106:

(Start: 36 @67335 has 3 MA's), (43, 67362), (57, 67401), (63, 67422), (67, 67443), (78, 67494), (82, 67503), (84, 67512), (86, 67515), (88, 67527), (95, 67566), (97, 67569), (111, 67635), (112, 67638), (113, 67650), (114, 67653), (116, 67665), (118, 67668), (119, 67674), (121, 67686),

Gene: Altheas_59 Start: 43024, Stop: 42620, Start Num: 70

Candidate Starts for Altheas_59:

(12, 43459), (15, 43426), (18, 43411), (20, 43366), (21, 43363), (28, 43180), (41, 43120), (42, 43117), (56, 43087), (Start: 70 @43024 has 24 MA's), (93, 42937), (110, 42856), (135, 42775), (139, 42739), (153, 42670), (156, 42628),

Gene: AluminumJesus_53 Start: 41962, Stop: 41567, Start Num: 69

Candidate Starts for AluminumJesus_53:

(Start: 69 @41962 has 9 MA's), (Start: 70 @41959 has 24 MA's), (84, 41917), (93, 41875), (110, 41794),

Gene: BabyDotz_57 Start: 43429, Stop: 43037, Start Num: 70

Candidate Starts for BabyDotz_57:

(58, 43498), (Start: 69 @43432 has 9 MA's), (Start: 70 @43429 has 24 MA's), (84, 43387), (93, 43345), (110, 43264), (123, 43219), (156, 43045),

Gene: BaconCheese_60 Start: 43894, Stop: 43499, Start Num: 70

Candidate Starts for BaconCheese_60:

(58, 43963), (Start: 69 @43897 has 9 MA's), (Start: 70 @43894 has 24 MA's), (110, 43732), (154, 43546), (156, 43507), (157, 43504),

Gene: BellaJr_83 Start: 47858, Stop: 48460, Start Num: 45

Candidate Starts for BellaJr_83:

(2, 47168), (5, 47267), (7, 47303), (9, 47330), (10, 47390), (19, 47558), (Start: 45 @47858 has 2 MA's), (Start: 61 @47903 has 1 MA's), (92, 48047), (93, 48050), (110, 48125), (120, 48188), (127, 48233), (137, 48323),

Gene: BiPauneto_21 Start: 8586, Stop: 9044, Start Num: 55

Candidate Starts for BiPauneto_21:

(3, 7887), (16, 8232), (Start: 55 @8586 has 9 MA's), (68, 8634), (Start: 69 @8652 has 9 MA's), (75, 8667), (85, 8700), (102, 8775), (104, 8787), (139, 8916),

Gene: Blab_55 Start: 42584, Stop: 42189, Start Num: 69

Candidate Starts for Blab_55:

(58, 42650), (Start: 69 @42584 has 9 MA's), (Start: 70 @42581 has 24 MA's), (93, 42497), (110, 42416),

Gene: BruhMoment_73 Start: 49223, Stop: 48708, Start Num: 47

Candidate Starts for BruhMoment_73:

(Start: 47 @49223 has 1 MA's), (93, 49073), (110, 48998), (118, 48950),

Gene: Casend_57 Start: 42837, Stop: 42448, Start Num: 70

Candidate Starts for Casend_57:

(Start: 69 @42840 has 9 MA's), (Start: 70 @42837 has 24 MA's), (84, 42798), (110, 42675), (123, 42630), (156, 42456),

Gene: Commandaria_21 Start: 9793, Stop: 10248, Start Num: 55

Candidate Starts for Commandaria_21:

(1, 9061), (4, 9148), (13, 9418), (22, 9520), (Start: 55 @9793 has 9 MA's), (Start: 69 @9856 has 9 MA's), (75, 9871), (102, 9979), (139, 10120),

Gene: Cuke_82 Start: 48535, Stop: 49002, Start Num: 62

Candidate Starts for Cuke_82:

(Start: 62 @48535 has 6 MA's), (66, 48553), (73, 48595), (74, 48598), (84, 48628), (102, 48685), (125, 48799), (129, 48817), (132, 48841), (136, 48862), (138, 48874), (139, 48883), (142, 48895), (148, 48922), (149, 48928), (151, 48940),

Gene: Demikore_104 Start: 64612, Stop: 65076, Start Num: 62

Candidate Starts for Demikore_104:

(Start: 62 @64612 has 6 MA's), (133, 64918), (138, 64948), (139, 64957), (144, 64978), (146, 64990), (149, 65002), (150, 65005),

Gene: DonaldDuck_56 Start: 42186, Stop: 41797, Start Num: 70

Candidate Starts for DonaldDuck_56:

(Start: 69 @42189 has 9 MA's), (Start: 70 @42186 has 24 MA's), (84, 42147), (110, 42024), (123, 41979), (156, 41805),

Gene: EverythinBagel_55 Start: 42550, Stop: 42158, Start Num: 69

Candidate Starts for EverythinBagel_55:

(Start: 69 @42550 has 9 MA's), (Start: 70 @42547 has 24 MA's), (84, 42508), (110, 42385), (123, 42340), (156, 42166),

Gene: Fowlmouth_83 Start: 51110, Stop: 51577, Start Num: 62

Candidate Starts for Fowlmouth_83:

(Start: 62 @51110 has 6 MA's), (74, 51173), (77, 51182), (80, 51191), (106, 51278), (117, 51335), (132, 51416), (138, 51449), (139, 51458), (142, 51470),

Gene: FrankDeliGuy_53 Start: 42165, Stop: 41773, Start Num: 70

Candidate Starts for FrankDeliGuy_53:

(Start: 60 @42216 has 1 MA's), (Start: 69 @42168 has 9 MA's), (Start: 70 @42165 has 24 MA's), (84, 42126), (93, 42084), (110, 42003), (122, 41958), (156, 41781),

Gene: Fury_26 Start: 10463, Stop: 10972, Start Num: 37

Candidate Starts for Fury_26:

(Start: 37 @10463 has 2 MA's), (Start: 69 @10580 has 9 MA's), (75, 10595), (105, 10718), (108, 10727), (139, 10844), (141, 10856),

Gene: Gazebo_56 Start: 42670, Stop: 42278, Start Num: 70

Candidate Starts for Gazebo_56:

(Start: 69 @42673 has 9 MA's), (Start: 70 @42670 has 24 MA's), (84, 42628), (110, 42505), (123, 42460), (156, 42286), (157, 42283),

Gene: Gibbles_47 Start: 45170, Stop: 44748, Start Num: 59

Candidate Starts for Gibbles_47:

(Start: 59 @45170 has 5 MA's), (66, 45134), (72, 45095), (74, 45089), (79, 45074), (107, 44984), (142, 44855), (151, 44810), (156, 44756),

Gene: Gmala1_37 Start: 39458, Stop: 38919, Start Num: 42

Candidate Starts for Gmala1_37:

(39, 39467), (42, 39458), (49, 39425), (87, 39281), (93, 39257), (115, 39143), (149, 38987),

Gene: GordDuk1_37 Start: 39399, Stop: 38860, Start Num: 42

Candidate Starts for GordDuk1_37:

(39, 39408), (42, 39399), (49, 39366), (87, 39222), (93, 39198), (115, 39084), (149, 38928),

Gene: GordTnk2_37 Start: 39365, Stop: 38826, Start Num: 42

Candidate Starts for GordTnk2_37:

(39, 39374), (42, 39365), (49, 39332), (87, 39188), (93, 39164), (115, 39050), (149, 38894),

Gene: Grassboy_59 Start: 43110, Stop: 42643, Start Num: 60

Candidate Starts for Grassboy_59:

(Start: 60 @43110 has 1 MA's), (Start: 69 @43062 has 9 MA's), (Start: 70 @43059 has 24 MA's), (84, 43020), (93, 42978), (110, 42897), (133, 42801), (156, 42651), (157, 42648),

Gene: HomeFry_23 Start: 9368, Stop: 9835, Start Num: 51

Candidate Starts for HomeFry_23:

(8, 8822), (11, 8981), (14, 9017), (51, 9368), (64, 9413), (68, 9428), (Start: 69 @9443 has 9 MA's), (75, 9458), (89, 9509), (102, 9566), (105, 9581), (107, 9587), (139, 9707),

Gene: HubbaBubba_16 Start: 7112, Stop: 7570, Start Num: 55

Candidate Starts for HubbaBubba_16:

(16, 6758), (Start: 55 @7112 has 9 MA's), (68, 7160), (Start: 69 @7178 has 9 MA's), (75, 7193), (85, 7226), (102, 7301), (139, 7442), (156, 7562),

Gene: Hyperion_57 Start: 42845, Stop: 42456, Start Num: 70

Candidate Starts for Hyperion_57:

(58, 42914), (Start: 69 @42848 has 9 MA's), (Start: 70 @42845 has 24 MA's), (93, 42764), (110, 42683), (156, 42464),

Gene: IDyn_19 Start: 8503, Stop: 8961, Start Num: 55

Candidate Starts for IDyn_19:

(16, 8149), (Start: 55 @8503 has 9 MA's), (68, 8551), (Start: 69 @8569 has 9 MA's), (75, 8584), (85, 8617), (89, 8635), (102, 8692), (139, 8833),

Gene: Indlulamithi_73 Start: 51686, Stop: 52294, Start Num: 32

Candidate Starts for Indlulamithi_73:

(Start: 32 @51686 has 1 MA's), (34, 51707), (48, 51758), (Start: 62 @51800 has 6 MA's), (72, 51857), (87, 51911), (91, 51926), (96, 51947), (98, 51950), (103, 51974), (104, 51977), (133, 52136), (138, 52166), (143, 52190), (152, 52235), (156, 52286),

Gene: Jehoshaphat_58 Start: 43108, Stop: 42716, Start Num: 69

Candidate Starts for Jehoshaphat_58:

(Start: 69 @43108 has 9 MA's), (Start: 70 @43105 has 24 MA's), (84, 43066), (110, 42943), (123, 42898), (156, 42724),

Gene: Judebell_58 Start: 42554, Stop: 42165, Start Num: 70

Candidate Starts for Judebell_58:

(Start: 60 @42605 has 1 MA's), (Start: 69 @42557 has 9 MA's), (Start: 70 @42554 has 24 MA's), (84, 42515), (93, 42473), (110, 42392), (123, 42347), (156, 42173),

Gene: Jumbo_42 Start: 45467, Stop: 44925, Start Num: 52

Candidate Starts for Jumbo_42:

(29, 45563), (38, 45521), (42, 45509), (44, 45494), (Start: 52 @45467 has 1 MA's), (71, 45380), (107, 45239), (109, 45227), (124, 45140), (136, 45095), (138, 45083), (143, 45050), (150, 44993),

Gene: Kampe_49 Start: 45153, Stop: 44731, Start Num: 59

Candidate Starts for Kampe_49:

(Start: 59 @45153 has 5 MA's), (66, 45117), (72, 45078), (74, 45072), (79, 45057), (107, 44967), (151, 44793),

Gene: Kyva_59 Start: 43089, Stop: 42700, Start Num: 70

Candidate Starts for Kyva_59:

(15, 43476), (28, 43245), (41, 43185), (42, 43182), (56, 43152), (Start: 69 @43092 has 9 MA's), (Start: 70 @43089 has 24 MA's), (110, 42927), (121, 42882), (156, 42708), (157, 42705),

Gene: Labelle_102 Start: 64800, Stop: 65264, Start Num: 62

Candidate Starts for Labelle_102:

(Start: 62 @64800 has 6 MA's), (133, 65106), (138, 65136), (139, 65145), (144, 65166), (149, 65190), (150, 65193),

Gene: Leopard_104 Start: 67266, Stop: 67778, Start Num: 36

Candidate Starts for Leopard_104:

(Start: 36 @67266 has 3 MA's), (43, 67293), (67, 67374), (78, 67425), (82, 67434), (84, 67443), (86, 67446), (95, 67497), (97, 67500), (111, 67566), (112, 67569), (113, 67581), (118, 67584), (119, 67590), (121, 67599),

Gene: Llemily_56 Start: 41881, Stop: 41492, Start Num: 70

Candidate Starts for Llemily_56:

(Start: 69 @41884 has 9 MA's), (Start: 70 @41881 has 24 MA's), (84, 41842), (110, 41719), (123, 41674), (156, 41500),

Gene: Lonelysoil_55 Start: 42037, Stop: 41648, Start Num: 70

Candidate Starts for Lonelysoil_55:

(Start: 60 @42088 has 1 MA's), (Start: 69 @42040 has 9 MA's), (Start: 70 @42037 has 24 MA's), (84, 41998), (93, 41956), (110, 41875), (123, 41830), (156, 41656),

Gene: MacGully_24 Start: 10356, Stop: 10865, Start Num: 61

Candidate Starts for MacGully_24:

(6, 9750), (23, 10098), (24, 10137), (Start: 61 @10356 has 1 MA's), (107, 10551), (130, 10677), (135, 10704), (148, 10785), (153, 10815),

Gene: Madruga_101 Start: 64424, Stop: 64888, Start Num: 62

Candidate Starts for Madruga_101:

(Start: 62 @64424 has 6 MA's), (133, 64730), (138, 64760), (139, 64769), (144, 64790), (146, 64802), (149, 64814), (150, 64817),

Gene: Marietta_20 Start: 8429, Stop: 8887, Start Num: 55

Candidate Starts for Marietta_20:

(16, 8075), (Start: 55 @8429 has 9 MA's), (68, 8477), (Start: 69 @8495 has 9 MA's), (75, 8510), (85, 8543), (89, 8561), (102, 8618), (156, 8879),

Gene: Mashley_56 Start: 42624, Stop: 42232, Start Num: 70

Candidate Starts for Mashley_56:

(27, 42828), (58, 42693), (Start: 69 @42627 has 9 MA's), (Start: 70 @42624 has 24 MA's), (84, 42582), (93, 42540), (110, 42459), (123, 42414), (156, 42240),

Gene: Mentos_61 Start: 43855, Stop: 43466, Start Num: 70

Candidate Starts for Mentos_61:

(15, 44245), (16, 44242), (28, 44011), (41, 43951), (42, 43948), (56, 43918), (Start: 69 @43858 has 9 MA's), (Start: 70 @43855 has 24 MA's), (110, 43693), (154, 43513), (156, 43474),

Gene: Mila11_60 Start: 44086, Stop: 43688, Start Num: 69

Candidate Starts for Mila11_60:

(58, 44152), (Start: 69 @44086 has 9 MA's), (Start: 70 @44083 has 24 MA's), (110, 43921), (154, 43735), (156, 43696), (157, 43693),

Gene: MorillMayhem_58 Start: 42963, Stop: 42565, Start Num: 69

Candidate Starts for MorillMayhem_58:

(58, 43029), (Start: 69 @42963 has 9 MA's), (Start: 70 @42960 has 24 MA's), (110, 42798), (154, 42612), (156, 42573), (157, 42570),

Gene: MrMiyagi_81 Start: 51354, Stop: 51842, Start Num: 62

Candidate Starts for MrMiyagi_81:

(53, 51333), (Start: 62 @51354 has 6 MA's), (66, 51372), (84, 51447), (94, 51495), (102, 51525), (109, 51558), (128, 51654), (129, 51657), (130, 51660), (138, 51714), (142, 51735),

Gene: NadineRae_18 Start: 7679, Stop: 8137, Start Num: 55

Candidate Starts for NadineRae_18:

(16, 7325), (Start: 55 @7679 has 9 MA's), (68, 7727), (Start: 69 @7745 has 9 MA's), (75, 7760), (85, 7793), (89, 7811), (102, 7868), (106, 7886), (139, 8009), (156, 8129),

Gene: Namago_57 Start: 42027, Stop: 41638, Start Num: 70

Candidate Starts for Namago_57:

(Start: 60 @42078 has 1 MA's), (Start: 69 @42030 has 9 MA's), (Start: 70 @42027 has 24 MA's), (84, 41988), (93, 41946), (110, 41865), (123, 41820), (156, 41646), (157, 41643),

Gene: Nikan_80 Start: 49613, Stop: 49059, Start Num: 45

Candidate Starts for Nikan_80:

(33, 49658), (Start: 45 @49613 has 2 MA's), (90, 49439), (93, 49424), (101, 49397), (107, 49370), (118, 49301),

Gene: Nike_59 Start: 43351, Stop: 42950, Start Num: 69

Candidate Starts for Nike_59:

(Start: 69 @43351 has 9 MA's), (Start: 70 @43348 has 24 MA's), (73, 43336), (93, 43264), (110, 43183), (139, 43069), (156, 42958),

Gene: Ollypop_78 Start: 50399, Stop: 49848, Start Num: 45

Candidate Starts for Ollypop_78:

(Start: 45 @50399 has 2 MA's), (107, 50156), (110, 50135), (118, 50087), (120, 50072), (131, 50021), (147, 49934),

Gene: Onyinye_105 Start: 67128, Stop: 67658, Start Num: 36

Candidate Starts for Onyinye_105:

(Start: 36 @67128 has 3 MA's), (43, 67155), (57, 67194), (63, 67215), (67, 67236), (78, 67287), (82, 67296), (84, 67305), (86, 67308), (88, 67320), (95, 67359), (97, 67362), (111, 67428), (112, 67431),

(113, 67443), (114, 67446), (116, 67458), (118, 67461), (119, 67467), (121, 67479),

Gene: Orchid_48 Start: 45154, Stop: 44732, Start Num: 59

Candidate Starts for Orchid_48:

(Start: 59 @45154 has 5 MA's), (66, 45118), (72, 45079), (74, 45073), (79, 45058), (107, 44968), (151, 44794),

Gene: Patience_103 Start: 65328, Stop: 65792, Start Num: 62

Candidate Starts for Patience_103:

(Start: 62 @65328 has 6 MA's), (133, 65634), (138, 65664), (139, 65673), (144, 65694), (146, 65706), (149, 65718), (150, 65721),

Gene: PatrickStar_49 Start: 45153, Stop: 44731, Start Num: 59

Candidate Starts for PatrickStar_49:

(Start: 59 @45153 has 5 MA's), (66, 45117), (72, 45078), (74, 45072), (79, 45057), (107, 44967), (151, 44793),

Gene: Pemberton_21 Start: 8397, Stop: 8855, Start Num: 55

Candidate Starts for Pemberton_21:

(16, 8043), (Start: 55 @8397 has 9 MA's), (68, 8445), (Start: 69 @8463 has 9 MA's), (75, 8478), (85, 8511), (102, 8586), (139, 8727),

Gene: Phabia_56 Start: 42299, Stop: 41907, Start Num: 69

Candidate Starts for Phabia_56:

(Start: 69 @42299 has 9 MA's), (Start: 70 @42296 has 24 MA's), (84, 42257), (110, 42134), (123, 42089), (156, 41915),

Gene: Pleakley_26 Start: 10464, Stop: 10973, Start Num: 37

Candidate Starts for Pleakley_26:

(Start: 37 @10464 has 2 MA's), (Start: 69 @10581 has 9 MA's), (75, 10596), (105, 10719), (108, 10728), (139, 10845), (141, 10857),

Gene: Quammi_54 Start: 41996, Stop: 41607, Start Num: 70

Candidate Starts for Quammi_54:

(Start: 69 @41999 has 9 MA's), (Start: 70 @41996 has 24 MA's), (84, 41957), (110, 41834), (123, 41789), (156, 41615),

Gene: Raqqa_87 Start: 48508, Stop: 49080, Start Num: 54

Candidate Starts for Raqqa_87:

(Start: 54 @48508 has 2 MA's), (92, 48667), (93, 48670), (110, 48745), (118, 48793),

Gene: Rizwana_63 Start: 46128, Stop: 45559, Start Num: 46

Candidate Starts for Rizwana_63:

(Start: 46 @46128 has 3 MA's), (77, 46002), (83, 45984), (93, 45939), (100, 45918), (138, 45690), (140, 45678),

Gene: RobinSparkles_52 Start: 45706, Stop: 45284, Start Num: 59

Candidate Starts for RobinSparkles_52:

(Start: 59 @45706 has 5 MA's), (66, 45670), (72, 45631), (74, 45625), (79, 45610), (107, 45520), (151, 45346),

Gene: Rowlf_53 Start: 41900, Stop: 41508, Start Num: 70

Candidate Starts for Rowlf_53:

(53, 41969), (Start: 69 @41903 has 9 MA's), (Start: 70 @41900 has 24 MA's), (84, 41858), (110, 41735), (154, 41555), (156, 41516),

Gene: Rudy_54 Start: 42035, Stop: 41643, Start Num: 69

Candidate Starts for Rudy_54:

(Start: 69 @42035 has 9 MA's), (Start: 70 @42032 has 24 MA's), (84, 41993), (110, 41870), (123, 41825), (156, 41651),

Gene: SallyK_58 Start: 43182, Stop: 42760, Start Num: 69

Candidate Starts for SallyK_58:

(Start: 69 @43182 has 9 MA's), (Start: 70 @43179 has 24 MA's), (84, 43137), (93, 43095), (110, 43014), (134, 42918), (156, 42768),

Gene: Scuba_26 Start: 10550, Stop: 11059, Start Num: 37

Candidate Starts for Scuba_26:

(Start: 37 @10550 has 2 MA's), (Start: 69 @10667 has 9 MA's), (75, 10682), (76, 10685), (105, 10805), (108, 10814), (139, 10931), (141, 10943), (142, 10952),

Gene: Sillytadpoles_57 Start: 41869, Stop: 41480, Start Num: 70

Candidate Starts for Sillytadpoles_57:

(Start: 69 @41872 has 9 MA's), (Start: 70 @41869 has 24 MA's), (84, 41830), (110, 41707), (123, 41662), (156, 41488),

Gene: SlySloth_59 Start: 42544, Stop: 42152, Start Num: 70

Candidate Starts for SlySloth_59:

(Start: 69 @42547 has 9 MA's), (Start: 70 @42544 has 24 MA's), (84, 42502), (93, 42460), (110, 42379), (123, 42334), (156, 42160),

Gene: Squash_61 Start: 43540, Stop: 43148, Start Num: 70

Candidate Starts for Squash_61:

(58, 43609), (Start: 69 @43543 has 9 MA's), (Start: 70 @43540 has 24 MA's), (84, 43498), (93, 43456), (110, 43375), (123, 43330),

Gene: Statler_58 Start: 42622, Stop: 42227, Start Num: 69

Candidate Starts for Statler_58:

(58, 42688), (Start: 69 @42622 has 9 MA's), (Start: 70 @42619 has 24 MA's), (84, 42577), (93, 42535), (110, 42454), (123, 42409), (156, 42235),

Gene: StrawberryJamm_60 Start: 42333, Stop: 41941, Start Num: 70

Candidate Starts for StrawberryJamm_60:

(Start: 69 @42336 has 9 MA's), (Start: 70 @42333 has 24 MA's), (84, 42291), (93, 42249), (110, 42168), (123, 42123), (156, 41949), (157, 41946),

Gene: Sukkupi_20 Start: 8477, Stop: 8935, Start Num: 55

Candidate Starts for Sukkupi_20:

(3, 7778), (16, 8123), (Start: 55 @8477 has 9 MA's), (68, 8525), (Start: 69 @8543 has 9 MA's), (75, 8558), (85, 8591), (102, 8666), (104, 8678), (139, 8807),

Gene: SuperSonics_109 Start: 64383, Stop: 64847, Start Num: 62

Candidate Starts for SuperSonics_109:

(Start: 62 @64383 has 6 MA's), (133, 64689), (138, 64719), (139, 64728), (144, 64749), (149, 64773), (150, 64776),

Gene: Tank_63 Start: 46124, Stop: 45591, Start Num: 46
Candidate Starts for Tank_63:
(Start: 46 @46124 has 3 MA's), (138, 45722), (145, 45680),

Gene: Teehee_57 Start: 43102, Stop: 42713, Start Num: 70
Candidate Starts for Teehee_57:
(Start: 69 @43105 has 9 MA's), (Start: 70 @43102 has 24 MA's), (84, 43063), (110, 42940), (123, 42895), (156, 42721),

Gene: ThayneTheZag_92 Start: 49112, Stop: 49648, Start Num: 54
Candidate Starts for ThayneTheZag_92:
(19, 48812), (Start: 54 @49112 has 2 MA's), (99, 49262), (109, 49307), (110, 49316), (118, 49364), (134, 49487), (137, 49511),

Gene: Tissue_58 Start: 42946, Stop: 42539, Start Num: 70
Candidate Starts for Tissue_58:
(15, 43333), (16, 43330), (28, 43102), (41, 43042), (42, 43039), (56, 43009), (Start: 69 @42949 has 9 MA's), (Start: 70 @42946 has 24 MA's), (110, 42784), (156, 42547), (157, 42544),

Gene: Viceroy_55 Start: 42002, Stop: 41613, Start Num: 70
Candidate Starts for Viceroy_55:
(Start: 69 @42005 has 9 MA's), (Start: 70 @42002 has 24 MA's), (84, 41963), (110, 41840), (123, 41795), (156, 41621),

Gene: Wayne3_58 Start: 42865, Stop: 42476, Start Num: 70
Candidate Starts for Wayne3_58:
(Start: 69 @42868 has 9 MA's), (Start: 70 @42865 has 24 MA's), (84, 42826), (110, 42703), (123, 42658), (156, 42484),

Gene: WheelerS25_64 Start: 44030, Stop: 43635, Start Num: 69
Candidate Starts for WheelerS25_64:
(Start: 69 @44030 has 9 MA's), (Start: 70 @44027 has 24 MA's), (84, 43985), (110, 43862), (154, 43682), (156, 43643),

Gene: Wheelie_56 Start: 42186, Stop: 41797, Start Num: 70
Candidate Starts for Wheelie_56:
(Start: 69 @42189 has 9 MA's), (Start: 70 @42186 has 24 MA's), (84, 42147), (110, 42024), (123, 41979), (156, 41805),

Gene: WhoseManz_20 Start: 8040, Stop: 8498, Start Num: 55
Candidate Starts for WhoseManz_20:
(16, 7686), (Start: 55 @8040 has 9 MA's), (68, 8088), (Start: 69 @8106 has 9 MA's), (75, 8121), (85, 8154), (89, 8172), (102, 8229), (156, 8490),

Gene: Wilde_65 Start: 46423, Stop: 45890, Start Num: 46
Candidate Starts for Wilde_65:
(Start: 46 @46423 has 3 MA's), (138, 46021), (145, 45979),

Gene: Wollypog_81 Start: 56236, Stop: 56814, Start Num: 35
Candidate Starts for Wollypog_81:
(28, 56194), (31, 56209), (Start: 35 @56236 has 1 MA's), (Start: 47 @56284 has 1 MA's), (50, 56296), (65, 56350), (104, 56476), (108, 56488), (119, 56560), (126, 56605), (137, 56668), (138, 56674), (151, 56752), (155, 56791),

Gene: Yndexa_20 Start: 8477, Stop: 8935, Start Num: 55

Candidate Starts for Yndexa_20:

(3, 7778), (16, 8123), (Start: 55 @8477 has 9 MA's), (68, 8525), (Start: 69 @8543 has 9 MA's), (75, 8558), (85, 8591), (102, 8666), (104, 8678), (139, 8807),

Gene: Zagie_57 Start: 42527, Stop: 42138, Start Num: 70

Candidate Starts for Zagie_57:

(Start: 60 @42578 has 1 MA's), (Start: 69 @42530 has 9 MA's), (Start: 70 @42527 has 24 MA's), (84, 42488), (93, 42446), (110, 42365), (123, 42320), (156, 42146),

Gene: Zhafia_59 Start: 42666, Stop: 42277, Start Num: 70

Candidate Starts for Zhafia_59:

(Start: 69 @42669 has 9 MA's), (Start: 70 @42666 has 24 MA's), (84, 42627), (110, 42504), (123, 42459), (156, 42285),

Gene: Zucker_85 Start: 49487, Stop: 49963, Start Num: 54

Candidate Starts for Zucker_85:

(19, 49187), (Start: 54 @49487 has 2 MA's), (109, 49670), (110, 49679), (145, 49874),