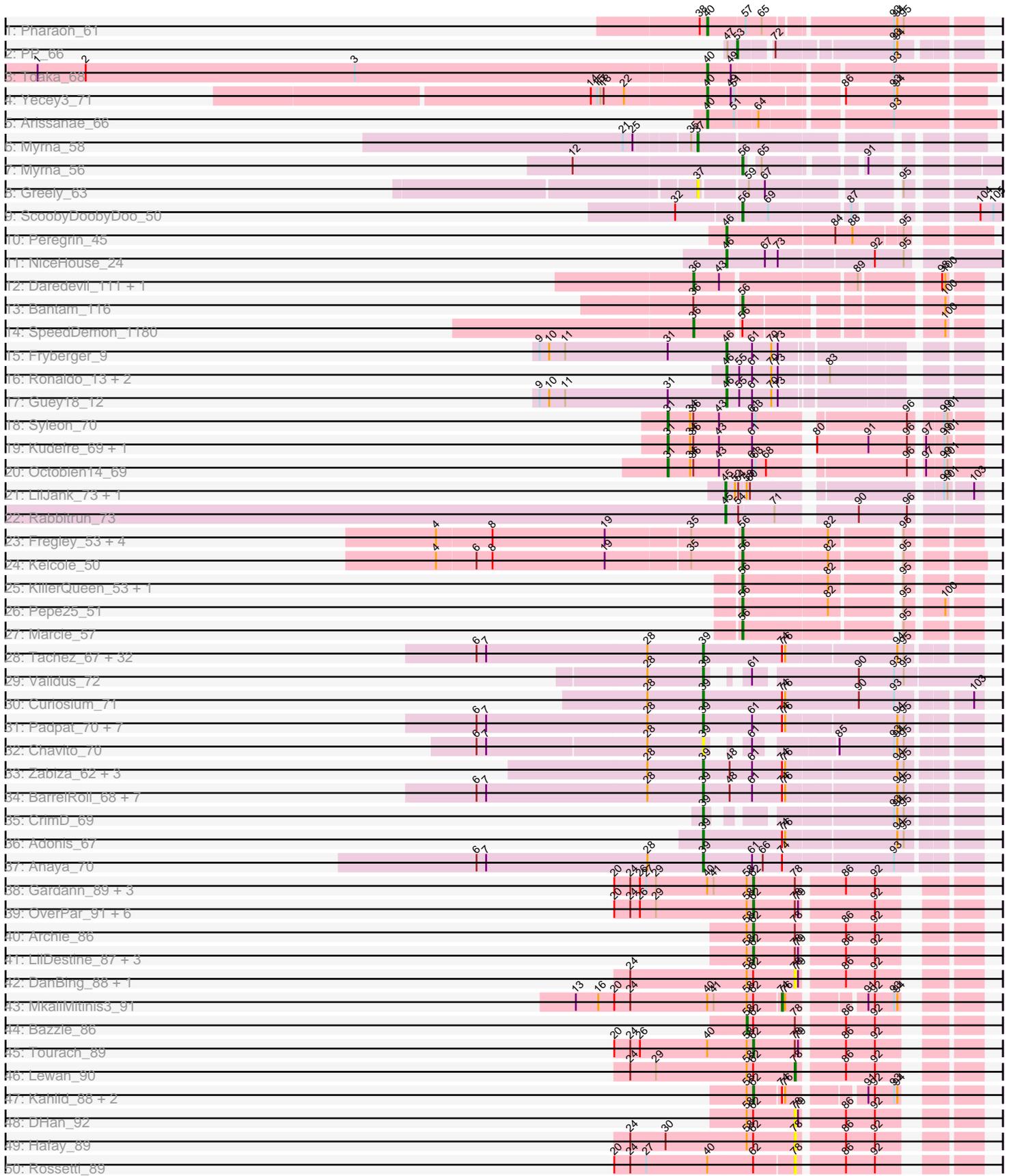
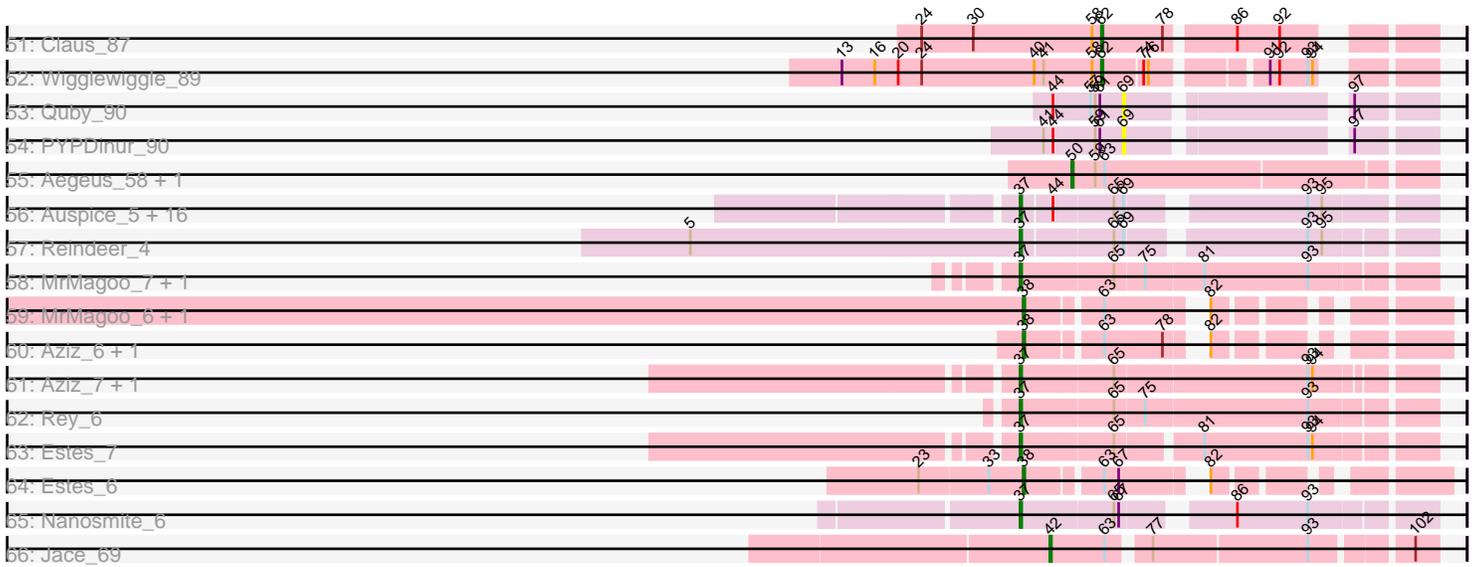


Pham 283546



Pham 283546



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 283546 Report

This analysis was run 02/23/26 on database version 636.

Pham number 283546 has 161 members, 17 are drafts.

Phages represented in each track:

- Track 1 : Pharaoh_61
- Track 2 : PP_66
- Track 3 : Toaka_68
- Track 4 : Yecey3_71
- Track 5 : Arissanae_66
- Track 6 : Myrna_58
- Track 7 : Myrna_56
- Track 8 : Greely_63
- Track 9 : ScoobyDoobyDoo_50
- Track 10 : Peregrin_45
- Track 11 : NiceHouse_24
- Track 12 : Daredevil_111, Towmatter_111
- Track 13 : Bantam_116
- Track 14 : SpeedDemon_1180
- Track 15 : Fryberger_9
- Track 16 : Ronaldo_13, Ziko_14, Volt_13
- Track 17 : Guey18_12
- Track 18 : Syleon_70
- Track 19 : Kudefre_69, Sephiroth_68
- Track 20 : Octobien14_69
- Track 21 : LilJank_73, Trax_73
- Track 22 : Rabbitrun_73
- Track 23 : Fregley_53, Romm_54, CandC_51, RobinRose_54, OneinaGillian_52
- Track 24 : Kelcole_50
- Track 25 : KillerQueen_53, Tempo_52
- Track 26 : Pepe25_51
- Track 27 : Marcie_57
- Track 28 : Tachez_67, BGlluviae_67, Jarvi_67, Blizzard_67, Atiba_68, Llorens_67, Adephegia_67, Hyperbowlee_67, CaseJules_69, Homura_67, Spock_67, Rosmarinus_67, ShiaSurprise_68, Joy99_67, Boiiii_67, Durfee_67, Piatt_67, Capricorn_67, Peel_67, Belladonna_67, Padfoot_67, Topper_67, Dalmuri_67, Inky_67, CallaLilly_67, Asayake_67, Jeckyll_67, Twitch_67, Lunahalos_67, AlishaPH_67, CREW_67, BEEST_67, Geraldini_70
- Track 29 : Validus_72
- Track 30 : Curiosium_71
- Track 31 : Padpat_70, Emerson_69, Pokerus_67, QuincyRose_65, Clipper_71, Beezoo_69, Ganymede_67, MacKat_63

- Track 32 : Chavito_70
- Track 33 : Zabiza_62, Ramen_68, ActinUp_67, HedwigODU_67
- Track 34 : BarrelRoll_68, Rapunzel97_69, TruffulaTree_68, Slimphazie_68, Zavala_70, Mynx_69, Jayhawk_69, MeaningOfLife_68
- Track 35 : CrimD_69
- Track 36 : Adonis_67
- Track 37 : Anaya_70
- Track 38 : Gardann_89, Nicholasp3_89, Rumpelstiltskin_85, Underpass_81
- Track 39 : OverPar_91, Loadrie_88, Faith1_89, Zakai_90, Itos_89, Crossroads_89, Gabriela_89
- Track 40 : Archie_86
- Track 41 : LilDestine_87, GuuelaD_86, Douge_90, ZhongYanYuan_86
- Track 42 : DanBing_88, Baoshan_86
- Track 43 : MkaliMitinis3_91
- Track 44 : Bazzle_86
- Track 45 : Tourach_89
- Track 46 : Lewan_90
- Track 47 : Kahlid_88, Wilder_90, Lynnae_90
- Track 48 : DHan_92
- Track 49 : Hafay_89
- Track 50 : Rossetti_89
- Track 51 : Claus_87
- Track 52 : Wigglewiggle_89
- Track 53 : Quby_90
- Track 54 : PYPDinur_90
- Track 55 : Aegeus_58, Baudelaire_58
- Track 56 : Auspice_5, Izel_6, RoseMarie_5, IPhane7_5, KleverKiS_5, Bongo_5, Bricole_5, Skinny_6, TyDawg_5, LilhomieP_5, SlimJimmy_5, FreakyGoo_6, Diminimus_6, PegLeg_5, TpudiCK_6, Glaske16_6, Dulcita_6
- Track 57 : Reindeer_4
- Track 58 : MrMagoo_7, GardenSalsa_7
- Track 59 : MrMagoo_6, GardenSalsa_6
- Track 60 : Aziz_6, GenevaB15_6
- Track 61 : Aziz_7, GenevaB15_7
- Track 62 : Rey_6
- Track 63 : Estes_7
- Track 64 : Estes_6
- Track 65 : Nanosmite_6
- Track 66 : Jace_69

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

The start number called the most often in the published annotations is 39, it was called in 58 of the 144 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- ActinUp_67, Adephegia_67, Adonis_67, AlishaPH_67, Anaya_70, Asayake_67, Atiba_68, BEEST_67, BGlluviae_67, BarrelRoll_68, Beezoo_69, Belladonna_67, Blizzard_67, Boiiii_67, CREW_67, CallaLilly_67, Capricorn_67, CaseJules_69, Chavito_70, Clipper_71, CrimD_69, Curiosium_71, Dalmuri_67, Durfee_67,

Emerson_69, Ganymede_67, Geraldini_70, HedwigODU_67, Homura_67, Hyperbowlee_67, Inky_67, Jarvi_67, Jayhawk_69, Jeckyll_67, Joy99_67, Llorens_67, Lunahalos_67, MacKat_63, MeaningOfLife_68, Mynx_69, Padfoot_67, Padpat_70, Peel_67, Piatt_67, Pokerus_67, QuincyRose_65, Ramen_68, Rapunzel97_69, Rosmarinus_67, ShiaSurprise_68, Slimphazie_68, Spock_67, Tachez_67, Topper_67, TruffulaTree_68, Twitch_67, Validus_72, Zabiza_62, Zavala_70,

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

-

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

- Aegeus_58, Archie_86, Arissanae_66, Auspice_5, Aziz_6, Aziz_7, Bantam_116, Baoshan_86, Baudelaire_58, Bazzle_86, Bongo_5, Bricole_5, CandC_51, Claus_87, Crossroads_89, DHan_92, DanBing_88, Daredevil_111, Diminimus_6, Douge_90, Dulcita_6, Estes_6, Estes_7, Faith1_89, FreakyGoo_6, Fregley_53, Fryberger_9, Gabriela_89, Gardann_89, GardenSalsa_6, GardenSalsa_7, GenevaB15_6, GenevaB15_7, Glaske16_6, Greely_63, Guey18_12, GuuelaD_86, Hafay_89, IPhane7_5, Itos_89, Izel_6, Jace_69, Kahlid_88, Kelcole_50, KillerQueen_53, KleverKiS_5, Kudrefre_69, Lewan_90, LilDestine_87, LilJank_73, LilhomieP_5, Loadrie_88, Lynnae_90, Marcie_57, MkaliMitinis3_91, MrMagoo_6, MrMagoo_7, Myrna_56, Myrna_58, Nanosmite_6, NiceHouse_24, Nicholasp3_89, Octobien14_69, OneinaGillian_52, OverPar_91, PP_66, PYPDinur_90, PegLeg_5, Pepe25_51, Peregrin_45, Pharaoh_61, Quby_90, Rabbitrun_73, Reindeer_4, Rey_6, RobinRose_54, Romm_54, Ronaldo_13, RoseMarie_5, Rossetti_89, Rumpelstiltskin_85, ScoobyDoobyDoo_50, Sephiroth_68, Skinny_6, SlimJimmy_5, SpeedDemon_1180, Syleon_70, Tempo_52, Toaka_68, Tourach_89, Towmatter_111, TpudiCK_6, Trax_73, TyDawg_5, Underpass_81, Volt_13, Wigglewiggles_89, Wilder_90, Yecey3_71, Zakai_90, ZhongYanYuan_86, Ziko_14,

Summary by start number:

Start 31:

- Found in 6 of 161 (3.7%) of genes in pham
- Manual Annotations of this start: 4 of 144
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Kudrefre_69 (DU1), Octobien14_69 (DU1), Sephiroth_68 (DU1), Syleon_70 (DU1),

Start 36:

- Found in 8 of 161 (5.0%) of genes in pham
- Manual Annotations of this start: 3 of 144
- Called 37.5% of time when present
- Phage (with cluster) where this start called: Daredevil_111 (DL), SpeedDemon_1180 (DL), Towmatter_111 (DL),

Start 37:

- Found in 27 of 161 (16.8%) of genes in pham
- Manual Annotations of this start: 23 of 144
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Auspice_5 (M1), Aziz_7 (M2), Bongo_5 (M1), Bricole_5 (M1), Diminimus_6 (M1), Dulcita_6 (M1), Estes_7 (M2), FreakyGoo_6 (M1), GardenSalsa_7 (M2), GenevaB15_7 (M2), Glaske16_6 (M1), Greely_63 (C2), IPhane7_5 (M1), Izel_6 (M1), KleverKiS_5 (M1), LilhomieP_5 (M1), MrMagoo_7 (M2),

Myrna_58 (C2), Nanosmite_6 (M3), PegLeg_5 (M1), Reindeer_4 (M1), Rey_6 (M2), RoseMarie_5 (M1), Skinny_6 (M1), SlimJimmy_5 (M1), TpudiCK_6 (M1), TyDawg_5 (M1),

Start 38:

- Found in 6 of 161 (3.7%) of genes in pham
- Manual Annotations of this start: 5 of 144
- Called 83.3% of time when present
- Phage (with cluster) where this start called: Aziz_6 (M2), Estes_6 (M2), GardenSalsa_6 (M2), GenevaB15_6 (M2), MrMagoo_6 (M2),

Start 39:

- Found in 59 of 161 (36.6%) of genes in pham
- Manual Annotations of this start: 58 of 144
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ActinUp_67 (K1), Adephagia_67 (K1), Adonis_67 (K1), AlishaPH_67 (K1), Anaya_70 (K1), Asayake_67 (K1), Atiba_68 (K1), BEEST_67 (K1), BGlluviae_67 (K1), BarrelRoll_68 (K1), Beezoo_69 (K1), Belladonna_67 (K1), Blizzard_67 (K1), Boiii_67 (K1), CREW_67 (K1), CallaLilly_67 (K1), Capricorn_67 (K1), CaseJules_69 (K1), Chavito_70 (K1), Clipper_71 (K1), CrimD_69 (K1), Curiosium_71 (K1), Dalmuri_67 (K1), Durfee_67 (K1), Emerson_69 (K1), Ganymede_67 (K1), Geraldini_70 (K1), HedwigODU_67 (K1), Homura_67 (K1), Hyperbowlee_67 (K1), Inky_67 (K1), Jarvi_67 (K1), Jayhawk_69 (K1), Jeckyll_67 (K1), Joy99_67 (K1), Llorens_67 (K1), Lunahalos_67 (K1), MacKat_63 (K1), MeaningOfLife_68 (K1), Mynx_69 (K1), Padfoot_67 (K1), Padpat_70 (K1), Peel_67 (K1), Piatt_67 (K1), Pokerus_67 (K1), QuincyRose_65 (K1), Ramen_68 (K1), Rapunzel97_69 (K1), Rosmarinus_67 (K1), ShiaSurprise_68 (K1), Slimphazie_68 (K1), Spock_67 (K1), Tachez_67 (K1), Topper_67 (K1), TruffulaTree_68 (K1), Twitch_67 (K1), Validus_72 (K1), Zabiza_62 (K1), Zavala_70 (K1),

Start 40:

- Found in 12 of 161 (7.5%) of genes in pham
- Manual Annotations of this start: 4 of 144
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Arissanae_66 (A9), Pharaoh_61 (A12), Toaka_68 (A9), Yecey3_71 (A9),

Start 42:

- Found in 1 of 161 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 144
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Jace_69 (singleton),

Start 45:

- Found in 3 of 161 (1.9%) of genes in pham
- Manual Annotations of this start: 2 of 144
- Called 100.0% of time when present
- Phage (with cluster) where this start called: LilJank_73 (DU2), Rabbitrun_73 (DU2), Trax_73 (DU2),

Start 46:

- Found in 7 of 161 (4.3%) of genes in pham
- Manual Annotations of this start: 7 of 144

- Called 100.0% of time when present
- Phage (with cluster) where this start called: Fryberger_9 (DP), Guey18_12 (DP), NiceHouse_24 (CE), Peregrin_45 (CB), Ronaldo_13 (DP), Volt_13 (DP), Ziko_14 (DP),

Start 50:

- Found in 2 of 161 (1.2%) of genes in pham
- Manual Annotations of this start: 2 of 144
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aegeus_58 (L5), Baudelaire_58 (L5),

Start 53:

- Found in 1 of 161 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 144
- Called 100.0% of time when present
- Phage (with cluster) where this start called: PP_66 (A7),

Start 56:

- Found in 14 of 161 (8.7%) of genes in pham
- Manual Annotations of this start: 12 of 144
- Called 92.9% of time when present
- Phage (with cluster) where this start called: Bantam_116 (DL), CandC_51 (EG), Fregley_53 (EG), Kelcole_50 (EG), KillerQueen_53 (EG), Marcie_57 (EG), Myrna_56 (C2), OneinaGillian_52 (EG), Pepe25_51 (EG), RobinRose_54 (EG), Romm_54 (EG), ScoobyDoobyDoo_50 (C2), Tempo_52 (EG),

Start 58:

- Found in 31 of 161 (19.3%) of genes in pham
- Manual Annotations of this start: 1 of 144
- Called 3.2% of time when present
- Phage (with cluster) where this start called: Bazzle_86 (L2),

Start 62:

- Found in 30 of 161 (18.6%) of genes in pham
- Manual Annotations of this start: 19 of 144
- Called 73.3% of time when present
- Phage (with cluster) where this start called: Archie_86 (L2), Claus_87 (L2), Crossroads_89 (L2), Douge_90 (L4), Faith1_89 (L2), Gabriela_89 (L2), Gardann_89 (L2), GuuelaD_86 (L2), Itos_89 (L2), Kahlid_88 (L2), LilDestine_87 (L2), Loadrie_88 (L2), Lynnae_90 (L2), Nicholasp3_89 (L2), OverPar_91 (L2), Rumpelstiltskin_85 (L2), Tourach_89 (L2), Underpass_81 (L2), Wigglewiggle_89 (L2), Wilder_90 (L2), Zakai_90 (L2), ZhongYanYuan_86 (L2),

Start 69:

- Found in 21 of 161 (13.0%) of genes in pham
- No Manual Annotations of this start.
- Called 9.5% of time when present
- Phage (with cluster) where this start called: PYPDinur_90 (L4), Quby_90 (L4),

Start 74:

- Found in 61 of 161 (37.9%) of genes in pham
- Manual Annotations of this start: 1 of 144
- Called 1.6% of time when present

- Phage (with cluster) where this start called: MkaliMitinis3_91 (L2),

Start 78:

- Found in 27 of 161 (16.8%) of genes in pham
- Manual Annotations of this start: 1 of 144
- Called 22.2% of time when present
- Phage (with cluster) where this start called: Baoshan_86 (L2), DHan_92 (L2), DanBing_88 (L2), Hafay_89 (L2), Lewan_90 (L2), Rossetti_89 (L2),

Summary by clusters:

There are 19 clusters represented in this pham: DL, M3, A12, CB, EG, DU1, CE, singleton, L4, K1, L5, L2, A7, M2, A9, M1, DU2, C2, DP,

Info for manual annotations of cluster A12:

- Start number 40 was manually annotated 1 time for cluster A12.

Info for manual annotations of cluster A7:

- Start number 53 was manually annotated 1 time for cluster A7.

Info for manual annotations of cluster A9:

- Start number 40 was manually annotated 3 times for cluster A9.

Info for manual annotations of cluster C2:

- Start number 37 was manually annotated 1 time for cluster C2.
- Start number 56 was manually annotated 2 times for cluster C2.

Info for manual annotations of cluster CB:

- Start number 46 was manually annotated 1 time for cluster CB.

Info for manual annotations of cluster CE:

- Start number 46 was manually annotated 1 time for cluster CE.

Info for manual annotations of cluster DL:

- Start number 36 was manually annotated 3 times for cluster DL.
- Start number 56 was manually annotated 1 time for cluster DL.

Info for manual annotations of cluster DP:

- Start number 46 was manually annotated 5 times for cluster DP.

Info for manual annotations of cluster DU1:

- Start number 31 was manually annotated 4 times for cluster DU1.

Info for manual annotations of cluster DU2:

- Start number 45 was manually annotated 2 times for cluster DU2.

Info for manual annotations of cluster EG:

- Start number 56 was manually annotated 9 times for cluster EG.

Info for manual annotations of cluster K1:

- Start number 39 was manually annotated 58 times for cluster K1.

Info for manual annotations of cluster L2:

- Start number 58 was manually annotated 1 time for cluster L2.
- Start number 62 was manually annotated 18 times for cluster L2.
- Start number 74 was manually annotated 1 time for cluster L2.
- Start number 78 was manually annotated 1 time for cluster L2.

Info for manual annotations of cluster L4:

- Start number 62 was manually annotated 1 time for cluster L4.

Info for manual annotations of cluster L5:

- Start number 50 was manually annotated 2 times for cluster L5.

Info for manual annotations of cluster M1:

- Start number 37 was manually annotated 15 times for cluster M1.

Info for manual annotations of cluster M2:

- Start number 37 was manually annotated 6 times for cluster M2.
- Start number 38 was manually annotated 5 times for cluster M2.

Info for manual annotations of cluster M3:

- Start number 37 was manually annotated 1 time for cluster M3.

Gene Information:

Gene: ActinUp_67 Start: 43706, Stop: 43945, Start Num: 39

Candidate Starts for ActinUp_67:

(28, 43655), (Start: 39 @43706 has 58 MA's), (48, 43730), (61, 43751), (Start: 74 @43778 has 1 MA's), (76, 43781), (94, 43880), (95, 43886),

Gene: Adephagia_67 Start: 43743, Stop: 43982, Start Num: 39

Candidate Starts for Adephagia_67:

(6, 43533), (7, 43542), (28, 43692), (Start: 39 @43743 has 58 MA's), (Start: 74 @43815 has 1 MA's), (76, 43818), (94, 43917), (95, 43923),

Gene: Adonis_67 Start: 43978, Stop: 44217, Start Num: 39

Candidate Starts for Adonis_67:

(Start: 39 @43978 has 58 MA's), (Start: 74 @44050 has 1 MA's), (76, 44053), (94, 44152), (95, 44158),

Gene: Aegeus_58 Start: 40986, Stop: 41207, Start Num: 50

Candidate Starts for Aegeus_58:

(Start: 50 @40986 has 2 MA's), (59, 41001), (63, 41007),

Gene: AlishaPH_67 Start: 44004, Stop: 44243, Start Num: 39

Candidate Starts for AlishaPH_67:

(6, 43794), (7, 43803), (28, 43953), (Start: 39 @44004 has 58 MA's), (Start: 74 @44076 has 1 MA's), (76, 44079), (94, 44178), (95, 44184),

Gene: Anaya_70 Start: 44697, Stop: 44936, Start Num: 39

Candidate Starts for Anaya_70:

(6, 44487), (7, 44496), (28, 44646), (Start: 39 @44697 has 58 MA's), (61, 44742), (66, 44751), (Start: 74 @44769 has 1 MA's), (93, 44868),

Gene: Archie_86 Start: 57063, Stop: 57242, Start Num: 62

Candidate Starts for Archie_86:

(Start: 58 @57057 has 1 MA's), (Start: 62 @57063 has 19 MA's), (Start: 78 @57102 has 1 MA's), (86, 57141), (92, 57168),

Gene: Arissanae_66 Start: 41220, Stop: 40978, Start Num: 40

Candidate Starts for Arissanae_66:

(Start: 40 @41220 has 4 MA's), (51, 41196), (64, 41178), (93, 41067),

Gene: Asayake_67 Start: 44058, Stop: 44297, Start Num: 39

Candidate Starts for Asayake_67:

(6, 43848), (7, 43857), (28, 44007), (Start: 39 @44058 has 58 MA's), (Start: 74 @44130 has 1 MA's), (76, 44133), (94, 44232), (95, 44238),

Gene: Atiba_68 Start: 43706, Stop: 43945, Start Num: 39

Candidate Starts for Atiba_68:

(6, 43496), (7, 43505), (28, 43655), (Start: 39 @43706 has 58 MA's), (Start: 74 @43778 has 1 MA's), (76, 43781), (94, 43880), (95, 43886),

Gene: Auspice_5 Start: 2366, Stop: 2133, Start Num: 37

Candidate Starts for Auspice_5:

(Start: 37 @2366 has 23 MA's), (44, 2348), (65, 2312), (69, 2306), (93, 2207), (95, 2198),

Gene: Aziz_6 Start: 2394, Stop: 2188, Start Num: 38

Candidate Starts for Aziz_6:

(Start: 38 @2394 has 5 MA's), (63, 2352), (Start: 78 @2316 has 1 MA's), (82, 2304),

Gene: Aziz_7 Start: 2636, Stop: 2391, Start Num: 37

Candidate Starts for Aziz_7:

(Start: 37 @2636 has 23 MA's), (65, 2579), (93, 2459), (94, 2456),

Gene: BEEST_67 Start: 44058, Stop: 44297, Start Num: 39

Candidate Starts for BEEST_67:

(6, 43848), (7, 43857), (28, 44007), (Start: 39 @44058 has 58 MA's), (Start: 74 @44130 has 1 MA's), (76, 44133), (94, 44232), (95, 44238),

Gene: BGlluviae_67 Start: 43861, Stop: 44100, Start Num: 39

Candidate Starts for BGlluviae_67:

(6, 43651), (7, 43660), (28, 43810), (Start: 39 @43861 has 58 MA's), (Start: 74 @43933 has 1 MA's), (76, 43936), (94, 44035), (95, 44041),

Gene: Bantam_116 Start: 73048, Stop: 73236, Start Num: 56

Candidate Starts for Bantam_116:

(Start: 36 @73009 has 3 MA's), (Start: 56 @73048 has 12 MA's), (100, 73207),

Gene: Baoshan_86 Start: 57756, Stop: 57896, Start Num: 78

Candidate Starts for Baoshan_86:

(24, 57603), (Start: 58 @57711 has 1 MA's), (Start: 62 @57717 has 19 MA's), (Start: 78 @57756 has 1 MA's), (79, 57759), (86, 57795), (92, 57822),

Gene: BarrelRoll_68 Start: 44144, Stop: 44383, Start Num: 39

Candidate Starts for BarrelRoll_68:

(6, 43934), (7, 43943), (28, 44093), (Start: 39 @44144 has 58 MA's), (48, 44168), (61, 44189), (Start: 74 @44216 has 1 MA's), (76, 44219), (94, 44318), (95, 44324),

Gene: Baudelaire_58 Start: 40986, Stop: 41207, Start Num: 50

Candidate Starts for Baudelaire_58:

(Start: 50 @40986 has 2 MA's), (59, 41001), (63, 41007),

Gene: Bazzle_86 Start: 57613, Stop: 57798, Start Num: 58

Candidate Starts for Bazzle_86:

(Start: 58 @57613 has 1 MA's), (Start: 62 @57619 has 19 MA's), (Start: 78 @57658 has 1 MA's), (86, 57697), (92, 57724),

Gene: Beezoo_69 Start: 44656, Stop: 44895, Start Num: 39

Candidate Starts for Beezoo_69:

(6, 44446), (7, 44455), (28, 44605), (Start: 39 @44656 has 58 MA's), (61, 44701), (Start: 74 @44728 has 1 MA's), (76, 44731), (94, 44830), (95, 44836),

Gene: Belladonna_67 Start: 43861, Stop: 44100, Start Num: 39

Candidate Starts for Belladonna_67:

(6, 43651), (7, 43660), (28, 43810), (Start: 39 @43861 has 58 MA's), (Start: 74 @43933 has 1 MA's), (76, 43936), (94, 44035), (95, 44041),

Gene: Blizzard_67 Start: 44058, Stop: 44297, Start Num: 39

Candidate Starts for Blizzard_67:

(6, 43848), (7, 43857), (28, 44007), (Start: 39 @44058 has 58 MA's), (Start: 74 @44130 has 1 MA's), (76, 44133), (94, 44232), (95, 44238),

Gene: Boiiii_67 Start: 44060, Stop: 44299, Start Num: 39

Candidate Starts for Boiiii_67:

(6, 43850), (7, 43859), (28, 44009), (Start: 39 @44060 has 58 MA's), (Start: 74 @44132 has 1 MA's), (76, 44135), (94, 44234), (95, 44240),

Gene: Bongo_5 Start: 2366, Stop: 2133, Start Num: 37

Candidate Starts for Bongo_5:

(Start: 37 @2366 has 23 MA's), (44, 2348), (65, 2312), (69, 2306), (93, 2207), (95, 2198),

Gene: Bricole_5 Start: 2365, Stop: 2132, Start Num: 37

Candidate Starts for Bricole_5:

(Start: 37 @2365 has 23 MA's), (44, 2347), (65, 2311), (69, 2305), (93, 2206), (95, 2197),

Gene: CREW_67 Start: 43861, Stop: 44100, Start Num: 39

Candidate Starts for CREW_67:

(6, 43651), (7, 43660), (28, 43810), (Start: 39 @43861 has 58 MA's), (Start: 74 @43933 has 1 MA's), (76, 43936), (94, 44035), (95, 44041),

Gene: CallaLilly_67 Start: 43784, Stop: 44023, Start Num: 39

Candidate Starts for CallaLilly_67:

(6, 43574), (7, 43583), (28, 43733), (Start: 39 @43784 has 58 MA's), (Start: 74 @43856 has 1 MA's), (76, 43859), (94, 43958), (95, 43964),

Gene: CandC_51 Start: 36309, Stop: 36118, Start Num: 56

Candidate Starts for CandC_51:

(4, 36582), (8, 36531), (19, 36426), (35, 36351), (Start: 56 @36309 has 12 MA's), (82, 36234), (95, 36177),

Gene: Capricorn_67 Start: 43861, Stop: 44100, Start Num: 39

Candidate Starts for Capricorn_67:

(6, 43651), (7, 43660), (28, 43810), (Start: 39 @43861 has 58 MA's), (Start: 74 @43933 has 1 MA's), (76, 43936), (94, 44035), (95, 44041),

Gene: CaseJules_69 Start: 44058, Stop: 44297, Start Num: 39

Candidate Starts for CaseJules_69:

(6, 43848), (7, 43857), (28, 44007), (Start: 39 @44058 has 58 MA's), (Start: 74 @44130 has 1 MA's), (76, 44133), (94, 44232), (95, 44238),

Gene: Chavito_70 Start: 44900, Stop: 45100, Start Num: 39

Candidate Starts for Chavito_70:

(6, 44693), (7, 44702), (28, 44849), (Start: 39 @44900 has 58 MA's), (61, 44918), (85, 44981), (93, 45032), (94, 45035), (95, 45041),

Gene: Claus_87 Start: 57401, Stop: 57580, Start Num: 62

Candidate Starts for Claus_87:

(24, 57287), (30, 57320), (Start: 58 @57395 has 1 MA's), (Start: 62 @57401 has 19 MA's), (Start: 78 @57440 has 1 MA's), (86, 57479), (92, 57506),

Gene: Clipper_71 Start: 44760, Stop: 44999, Start Num: 39

Candidate Starts for Clipper_71:

(6, 44550), (7, 44559), (28, 44709), (Start: 39 @44760 has 58 MA's), (61, 44805), (Start: 74 @44832 has 1 MA's), (76, 44835), (94, 44934), (95, 44940),

Gene: CrimD_69 Start: 44683, Stop: 44892, Start Num: 39

Candidate Starts for CrimD_69:

(Start: 39 @44683 has 58 MA's), (93, 44824), (94, 44827), (95, 44833),

Gene: Crossroads_89 Start: 57560, Stop: 57739, Start Num: 62

Candidate Starts for Crossroads_89:

(20, 57431), (24, 57446), (26, 57455), (29, 57470), (Start: 58 @57554 has 1 MA's), (Start: 62 @57560 has 19 MA's), (Start: 78 @57599 has 1 MA's), (79, 57602), (92, 57665),

Gene: Curiosium_71 Start: 43377, Stop: 43622, Start Num: 39

Candidate Starts for Curiosium_71:

(28, 43326), (Start: 39 @43377 has 58 MA's), (Start: 74 @43449 has 1 MA's), (76, 43452), (90, 43521), (93, 43554), (103, 43614),

Gene: DHan_92 Start: 57819, Stop: 57959, Start Num: 78

Candidate Starts for DHan_92:

(Start: 58 @57774 has 1 MA's), (Start: 62 @57780 has 19 MA's), (Start: 78 @57819 has 1 MA's), (79, 57822), (86, 57858), (92, 57885),

Gene: Dalmuri_67 Start: 43861, Stop: 44100, Start Num: 39

Candidate Starts for Dalmuri_67:

(6, 43651), (7, 43660), (28, 43810), (Start: 39 @43861 has 58 MA's), (Start: 74 @43933 has 1 MA's), (76, 43936), (94, 44035), (95, 44041),

Gene: DanBing_88 Start: 57317, Stop: 57457, Start Num: 78

Candidate Starts for DanBing_88:

(24, 57164), (Start: 58 @57272 has 1 MA's), (Start: 62 @57278 has 19 MA's), (Start: 78 @57317 has 1 MA's), (79, 57320), (86, 57356), (92, 57383),

Gene: Daredevil_111 Start: 69987, Stop: 70223, Start Num: 36

Candidate Starts for Daredevil_111:

(Start: 36 @69987 has 3 MA's), (43, 70011), (89, 70125), (98, 70191), (100, 70194),

Gene: Diminimus_6 Start: 2365, Stop: 2132, Start Num: 37

Candidate Starts for Diminimus_6:

(Start: 37 @2365 has 23 MA's), (44, 2347), (65, 2311), (69, 2305), (93, 2206), (95, 2197),

Gene: Douge_90 Start: 56768, Stop: 56947, Start Num: 62

Candidate Starts for Douge_90:

(Start: 58 @56762 has 1 MA's), (Start: 62 @56768 has 19 MA's), (Start: 78 @56807 has 1 MA's), (79, 56810), (86, 56846), (92, 56873),

Gene: Dulcita_6 Start: 2365, Stop: 2132, Start Num: 37

Candidate Starts for Dulcita_6:

(Start: 37 @2365 has 23 MA's), (44, 2347), (65, 2311), (69, 2305), (93, 2206), (95, 2197),

Gene: Durfee_67 Start: 44058, Stop: 44297, Start Num: 39

Candidate Starts for Durfee_67:

(6, 43848), (7, 43857), (28, 44007), (Start: 39 @44058 has 58 MA's), (Start: 74 @44130 has 1 MA's), (76, 44133), (94, 44232), (95, 44238),

Gene: Emerson_69 Start: 44178, Stop: 44417, Start Num: 39

Candidate Starts for Emerson_69:

(6, 43968), (7, 43977), (28, 44127), (Start: 39 @44178 has 58 MA's), (61, 44223), (Start: 74 @44250 has 1 MA's), (76, 44253), (94, 44352), (95, 44358),

Gene: Estes_7 Start: 2641, Stop: 2399, Start Num: 37

Candidate Starts for Estes_7:

(Start: 37 @2641 has 23 MA's), (65, 2584), (81, 2536), (93, 2470), (94, 2467),

Gene: Estes_6 Start: 2402, Stop: 2196, Start Num: 38

Candidate Starts for Estes_6:

(23, 2465), (33, 2423), (Start: 38 @2402 has 5 MA's), (63, 2360), (67, 2351), (82, 2312),

Gene: Faith1_89 Start: 57485, Stop: 57664, Start Num: 62

Candidate Starts for Faith1_89:

(20, 57356), (24, 57371), (26, 57380), (29, 57395), (Start: 58 @57479 has 1 MA's), (Start: 62 @57485 has 19 MA's), (Start: 78 @57524 has 1 MA's), (79, 57527), (92, 57590),

Gene: FreakyGoo_6 Start: 2366, Stop: 2133, Start Num: 37

Candidate Starts for FreakyGoo_6:

(Start: 37 @2366 has 23 MA's), (44, 2348), (65, 2312), (69, 2306), (93, 2207), (95, 2198),

Gene: Fregley_53 Start: 36870, Stop: 36679, Start Num: 56

Candidate Starts for Fregley_53:

(4, 37143), (8, 37092), (19, 36987), (35, 36912), (Start: 56 @36870 has 12 MA's), (82, 36795), (95, 36738),

Gene: Fryberger_9 Start: 2013, Stop: 1810, Start Num: 46

Candidate Starts for Fryberger_9:

(9, 2187), (10, 2178), (11, 2163), (Start: 31 @2067 has 4 MA's), (Start: 46 @2013 has 7 MA's), (61, 1989), (70, 1971), (73, 1965),

Gene: Gabriela_89 Start: 56831, Stop: 57010, Start Num: 62

Candidate Starts for Gabriela_89:

(20, 56702), (24, 56717), (26, 56726), (29, 56741), (Start: 58 @56825 has 1 MA's), (Start: 62 @56831 has 19 MA's), (Start: 78 @56870 has 1 MA's), (79, 56873), (92, 56936),

Gene: Ganymede_67 Start: 44084, Stop: 44323, Start Num: 39

Candidate Starts for Ganymede_67:

(6, 43874), (7, 43883), (28, 44033), (Start: 39 @44084 has 58 MA's), (61, 44129), (Start: 74 @44156 has 1 MA's), (76, 44159), (94, 44258), (95, 44264),

Gene: Gardann_89 Start: 57320, Stop: 57499, Start Num: 62

Candidate Starts for Gardann_89:

(20, 57191), (24, 57206), (26, 57215), (27, 57221), (29, 57230), (Start: 40 @57278 has 4 MA's), (41, 57284), (Start: 58 @57314 has 1 MA's), (Start: 62 @57320 has 19 MA's), (Start: 78 @57359 has 1 MA's), (86, 57398), (92, 57425),

Gene: GardenSalsa_6 Start: 2415, Stop: 2209, Start Num: 38

Candidate Starts for GardenSalsa_6:

(Start: 38 @2415 has 5 MA's), (63, 2373), (82, 2325),

Gene: GardenSalsa_7 Start: 2660, Stop: 2412, Start Num: 37

Candidate Starts for GardenSalsa_7:

(Start: 37 @2660 has 23 MA's), (65, 2603), (75, 2585), (81, 2549), (93, 2483),

Gene: GenevaB15_7 Start: 2636, Stop: 2391, Start Num: 37

Candidate Starts for GenevaB15_7:

(Start: 37 @2636 has 23 MA's), (65, 2579), (93, 2459), (94, 2456),

Gene: GenevaB15_6 Start: 2394, Stop: 2188, Start Num: 38

Candidate Starts for GenevaB15_6:

(Start: 38 @2394 has 5 MA's), (63, 2352), (Start: 78 @2316 has 1 MA's), (82, 2304),

Gene: Geraldini_70 Start: 44740, Stop: 44979, Start Num: 39

Candidate Starts for Geraldini_70:

(6, 44530), (7, 44539), (28, 44689), (Start: 39 @44740 has 58 MA's), (Start: 74 @44812 has 1 MA's), (76, 44815), (94, 44914), (95, 44920),

Gene: Glaske16_6 Start: 2365, Stop: 2132, Start Num: 37

Candidate Starts for Glaske16_6:

(Start: 37 @2365 has 23 MA's), (44, 2347), (65, 2311), (69, 2305), (93, 2206), (95, 2197),

Gene: Greely_63 Start: 23265, Stop: 23489, Start Num: 37

Candidate Starts for Greely_63:

(Start: 37 @23265 has 23 MA's), (59, 23304), (67, 23319), (95, 23427),

Gene: Guey18_12 Start: 2707, Stop: 2504, Start Num: 46

Candidate Starts for Guey18_12:

(9, 2881), (10, 2872), (11, 2857), (Start: 31 @2761 has 4 MA's), (Start: 46 @2707 has 7 MA's), (55, 2695), (61, 2683), (70, 2665), (73, 2659),

Gene: GuuelaD_86 Start: 57444, Stop: 57623, Start Num: 62

Candidate Starts for GuuelaD_86:

(Start: 58 @57438 has 1 MA's), (Start: 62 @57444 has 19 MA's), (Start: 78 @57483 has 1 MA's), (79, 57486), (86, 57522), (92, 57549),

Gene: Hafay_89 Start: 57435, Stop: 57575, Start Num: 78

Candidate Starts for Hafay_89:

(24, 57282), (30, 57315), (Start: 58 @57390 has 1 MA's), (Start: 62 @57396 has 19 MA's), (Start: 78 @57435 has 1 MA's), (86, 57474), (92, 57501),

Gene: HedwigODU_67 Start: 43706, Stop: 43945, Start Num: 39

Candidate Starts for HedwigODU_67:

(28, 43655), (Start: 39 @43706 has 58 MA's), (48, 43730), (61, 43751), (Start: 74 @43778 has 1 MA's), (76, 43781), (94, 43880), (95, 43886),

Gene: Homura_67 Start: 43861, Stop: 44100, Start Num: 39

Candidate Starts for Homura_67:

(6, 43651), (7, 43660), (28, 43810), (Start: 39 @43861 has 58 MA's), (Start: 74 @43933 has 1 MA's), (76, 43936), (94, 44035), (95, 44041),

Gene: Hyperbowlee_67 Start: 44058, Stop: 44297, Start Num: 39

Candidate Starts for Hyperbowlee_67:

(6, 43848), (7, 43857), (28, 44007), (Start: 39 @44058 has 58 MA's), (Start: 74 @44130 has 1 MA's), (76, 44133), (94, 44232), (95, 44238),

Gene: IPHane7_5 Start: 2366, Stop: 2133, Start Num: 37

Candidate Starts for IPHane7_5:

(Start: 37 @2366 has 23 MA's), (44, 2348), (65, 2312), (69, 2306), (93, 2207), (95, 2198),

Gene: Inky_67 Start: 43861, Stop: 44100, Start Num: 39

Candidate Starts for Inky_67:

(6, 43651), (7, 43660), (28, 43810), (Start: 39 @43861 has 58 MA's), (Start: 74 @43933 has 1 MA's), (76, 43936), (94, 44035), (95, 44041),

Gene: Itos_89 Start: 56391, Stop: 56570, Start Num: 62

Candidate Starts for Itos_89:

(20, 56262), (24, 56277), (26, 56286), (29, 56301), (Start: 58 @56385 has 1 MA's), (Start: 62 @56391 has 19 MA's), (Start: 78 @56430 has 1 MA's), (79, 56433), (92, 56496),

Gene: Izel_6 Start: 2365, Stop: 2132, Start Num: 37

Candidate Starts for Izel_6:

(Start: 37 @2365 has 23 MA's), (44, 2347), (65, 2311), (69, 2305), (93, 2206), (95, 2197),

Gene: Jace_69 Start: 40976, Stop: 41194, Start Num: 42

Candidate Starts for Jace_69:

(Start: 42 @40976 has 1 MA's), (63, 41009), (77, 41030), (93, 41126), (102, 41180),

Gene: Jarvi_67 Start: 43861, Stop: 44100, Start Num: 39

Candidate Starts for Jarvi_67:

(6, 43651), (7, 43660), (28, 43810), (Start: 39 @43861 has 58 MA's), (Start: 74 @43933 has 1 MA's), (76, 43936), (94, 44035), (95, 44041),

Gene: Jayhawk_69 Start: 44204, Stop: 44443, Start Num: 39

Candidate Starts for Jayhawk_69:

(6, 43994), (7, 44003), (28, 44153), (Start: 39 @44204 has 58 MA's), (48, 44228), (61, 44249), (Start: 74 @44276 has 1 MA's), (76, 44279), (94, 44378), (95, 44384),

Gene: Jeckyll_67 Start: 43861, Stop: 44100, Start Num: 39

Candidate Starts for Jeckyll_67:

(6, 43651), (7, 43660), (28, 43810), (Start: 39 @43861 has 58 MA's), (Start: 74 @43933 has 1 MA's), (76, 43936), (94, 44035), (95, 44041),

Gene: Joy99_67 Start: 43790, Stop: 44029, Start Num: 39

Candidate Starts for Joy99_67:

(6, 43580), (7, 43589), (28, 43739), (Start: 39 @43790 has 58 MA's), (Start: 74 @43862 has 1 MA's), (76, 43865), (94, 43964), (95, 43970),

Gene: Kahlid_88 Start: 57250, Stop: 57417, Start Num: 62

Candidate Starts for Kahlid_88:

(Start: 58 @57244 has 1 MA's), (Start: 62 @57250 has 19 MA's), (Start: 74 @57274 has 1 MA's), (76, 57277), (91, 57337), (92, 57343), (93, 57361), (94, 57364),

Gene: Kelcole_50 Start: 36504, Stop: 36310, Start Num: 56

Candidate Starts for Kelcole_50:

(4, 36777), (6, 36741), (8, 36726), (19, 36621), (35, 36546), (Start: 56 @36504 has 12 MA's), (82, 36429), (95, 36372),

Gene: KillerQueen_53 Start: 36753, Stop: 36562, Start Num: 56

Candidate Starts for KillerQueen_53:

(Start: 56 @36753 has 12 MA's), (82, 36678), (95, 36621),

Gene: KleverKiS_5 Start: 2362, Stop: 2132, Start Num: 37

Candidate Starts for KleverKiS_5:

(Start: 37 @2362 has 23 MA's), (44, 2344), (65, 2308), (69, 2302), (93, 2203), (95, 2194),

Gene: Kudrefre_69 Start: 44258, Stop: 44521, Start Num: 31

Candidate Starts for Kudrefre_69:

(Start: 31 @44258 has 4 MA's), (34, 44279), (Start: 36 @44282 has 3 MA's), (43, 44306), (61, 44336), (80, 44381), (91, 44429), (96, 44465), (97, 44474), (99, 44489), (101, 44492),

Gene: Lewan_90 Start: 57483, Stop: 57623, Start Num: 78

Candidate Starts for Lewan_90:

(24, 57330), (29, 57354), (Start: 58 @57438 has 1 MA's), (Start: 62 @57444 has 19 MA's), (Start: 78 @57483 has 1 MA's), (86, 57522), (92, 57549),

Gene: LilDestine_87 Start: 57157, Stop: 57336, Start Num: 62

Candidate Starts for LilDestine_87:

(Start: 58 @57151 has 1 MA's), (Start: 62 @57157 has 19 MA's), (Start: 78 @57196 has 1 MA's), (79, 57199), (86, 57235), (92, 57262),

Gene: LilJank_73 Start: 46004, Stop: 46207, Start Num: 45

Candidate Starts for LilJank_73:

(Start: 45 @46004 has 2 MA's), (52, 46013), (54, 46016), (Start: 58 @46022 has 1 MA's), (60, 46025), (99, 46175), (101, 46178), (103, 46199),

Gene: LilhomieP_5 Start: 2366, Stop: 2133, Start Num: 37

Candidate Starts for LilhomieP_5:

(Start: 37 @2366 has 23 MA's), (44, 2348), (65, 2312), (69, 2306), (93, 2207), (95, 2198),

Gene: Llorens_67 Start: 43861, Stop: 44100, Start Num: 39

Candidate Starts for Llorens_67:

(6, 43651), (7, 43660), (28, 43810), (Start: 39 @43861 has 58 MA's), (Start: 74 @43933 has 1 MA's), (76, 43936), (94, 44035), (95, 44041),

Gene: Loadrie_88 Start: 57652, Stop: 57831, Start Num: 62

Candidate Starts for Loadrie_88:

(20, 57523), (24, 57538), (26, 57547), (29, 57562), (Start: 58 @57646 has 1 MA's), (Start: 62 @57652 has 19 MA's), (Start: 78 @57691 has 1 MA's), (79, 57694), (92, 57757),

Gene: Lunahalos_67 Start: 43861, Stop: 44100, Start Num: 39

Candidate Starts for Lunahalos_67:

(6, 43651), (7, 43660), (28, 43810), (Start: 39 @43861 has 58 MA's), (Start: 74 @43933 has 1 MA's), (76, 43936), (94, 44035), (95, 44041),

Gene: Lynnae_90 Start: 57262, Stop: 57429, Start Num: 62

Candidate Starts for Lynnae_90:

(Start: 58 @57256 has 1 MA's), (Start: 62 @57262 has 19 MA's), (Start: 74 @57286 has 1 MA's), (76, 57289), (91, 57349), (92, 57355), (93, 57373), (94, 57376),

Gene: MacKat_63 Start: 39644, Stop: 39883, Start Num: 39

Candidate Starts for MacKat_63:

(6, 39434), (7, 39443), (28, 39593), (Start: 39 @39644 has 58 MA's), (61, 39689), (Start: 74 @39716 has 1 MA's), (76, 39719), (94, 39818), (95, 39824),

Gene: Marcie_57 Start: 37372, Stop: 37181, Start Num: 56

Candidate Starts for Marcie_57:

(Start: 56 @37372 has 12 MA's), (95, 37240),

Gene: MeaningOfLife_68 Start: 44613, Stop: 44852, Start Num: 39

Candidate Starts for MeaningOfLife_68:

(6, 44403), (7, 44412), (28, 44562), (Start: 39 @44613 has 58 MA's), (48, 44637), (61, 44658), (Start: 74 @44685 has 1 MA's), (76, 44688), (94, 44787), (95, 44793),

Gene: MkaliMitinis3_91 Start: 57639, Stop: 57782, Start Num: 74

Candidate Starts for MkaliMitinis3_91:

(13, 57450), (16, 57471), (20, 57486), (24, 57501), (Start: 40 @57573 has 4 MA's), (41, 57579), (Start: 58 @57609 has 1 MA's), (Start: 62 @57615 has 19 MA's), (Start: 74 @57639 has 1 MA's), (76, 57642), (91, 57702), (92, 57708), (93, 57726), (94, 57729),

Gene: MrMagoo_7 Start: 2660, Stop: 2412, Start Num: 37

Candidate Starts for MrMagoo_7:

(Start: 37 @2660 has 23 MA's), (65, 2603), (75, 2585), (81, 2549), (93, 2483),

Gene: MrMagoo_6 Start: 2415, Stop: 2209, Start Num: 38

Candidate Starts for MrMagoo_6:

(Start: 38 @2415 has 5 MA's), (63, 2373), (82, 2325),

Gene: Mynx_69 Start: 44473, Stop: 44712, Start Num: 39

Candidate Starts for Mynx_69:

(6, 44263), (7, 44272), (28, 44422), (Start: 39 @44473 has 58 MA's), (48, 44497), (61, 44518), (Start: 74 @44545 has 1 MA's), (76, 44548), (94, 44647), (95, 44653),

Gene: Myrna_58 Start: 22613, Stop: 22840, Start Num: 37

Candidate Starts for Myrna_58:

(21, 22553), (25, 22562), (35, 22607), (Start: 37 @22613 has 23 MA's),

Gene: Myrna_56 Start: 22168, Stop: 22353, Start Num: 56

Candidate Starts for Myrna_56:

(12, 22015), (Start: 56 @22168 has 12 MA's), (65, 22177), (91, 22255),

Gene: Nanosmite_6 Start: 2681, Stop: 2448, Start Num: 37

Candidate Starts for Nanosmite_6:

(Start: 37 @2681 has 23 MA's), (65, 2624), (67, 2621), (86, 2564), (93, 2519),

Gene: NiceHouse_24 Start: 11340, Stop: 11110, Start Num: 46

Candidate Starts for NiceHouse_24:

(Start: 46 @11340 has 7 MA's), (67, 11304), (73, 11292), (92, 11208), (95, 11181),

Gene: Nicholasp3_89 Start: 57320, Stop: 57499, Start Num: 62

Candidate Starts for Nicholasp3_89:

(20, 57191), (24, 57206), (26, 57215), (27, 57221), (29, 57230), (Start: 40 @57278 has 4 MA's), (41, 57284), (Start: 58 @57314 has 1 MA's), (Start: 62 @57320 has 19 MA's), (Start: 78 @57359 has 1 MA's), (86, 57398), (92, 57425),

Gene: Octobien14_69 Start: 44537, Stop: 44797, Start Num: 31

Candidate Starts for Octobien14_69:

(Start: 31 @44537 has 4 MA's), (34, 44558), (Start: 36 @44561 has 3 MA's), (43, 44585), (61, 44615), (63, 44618), (68, 44627), (96, 44741), (97, 44750), (99, 44765), (101, 44768),

Gene: OneinaGillian_52 Start: 36406, Stop: 36215, Start Num: 56

Candidate Starts for OneinaGillian_52:

(4, 36679), (8, 36628), (19, 36523), (35, 36448), (Start: 56 @36406 has 12 MA's), (82, 36331), (95, 36274),

Gene: OverPar_91 Start: 57652, Stop: 57831, Start Num: 62

Candidate Starts for OverPar_91:

(20, 57523), (24, 57538), (26, 57547), (29, 57562), (Start: 58 @57646 has 1 MA's), (Start: 62 @57652 has 19 MA's), (Start: 78 @57691 has 1 MA's), (79, 57694), (92, 57757),

Gene: PP_66 Start: 45311, Stop: 45114, Start Num: 53

Candidate Starts for PP_66:

(47, 45320), (Start: 53 @45311 has 1 MA's), (72, 45284), (93, 45182), (94, 45179),

Gene: PYPDinur_90 Start: 57609, Stop: 57776, Start Num: 69

Candidate Starts for PYPDinur_90:

(41, 57558), (44, 57564), (59, 57591), (61, 57594), (69, 57609), (97, 57729),

Gene: Padfoot_67 Start: 44058, Stop: 44297, Start Num: 39

Candidate Starts for Padfoot_67:

(6, 43848), (7, 43857), (28, 44007), (Start: 39 @44058 has 58 MA's), (Start: 74 @44130 has 1 MA's), (76, 44133), (94, 44232), (95, 44238),

Gene: Padpat_70 Start: 44178, Stop: 44417, Start Num: 39

Candidate Starts for Padpat_70:

(6, 43968), (7, 43977), (28, 44127), (Start: 39 @44178 has 58 MA's), (61, 44223), (Start: 74 @44250 has 1 MA's), (76, 44253), (94, 44352), (95, 44358),

Gene: Peel_67 Start: 43863, Stop: 44102, Start Num: 39

Candidate Starts for Peel_67:

(6, 43653), (7, 43662), (28, 43812), (Start: 39 @43863 has 58 MA's), (Start: 74 @43935 has 1 MA's), (76, 43938), (94, 44037), (95, 44043),

Gene: PegLeg_5 Start: 2365, Stop: 2132, Start Num: 37

Candidate Starts for PegLeg_5:

(Start: 37 @2365 has 23 MA's), (44, 2347), (65, 2311), (69, 2305), (93, 2206), (95, 2197),

Gene: Pepe25_51 Start: 35948, Stop: 35757, Start Num: 56

Candidate Starts for Pepe25_51:

(Start: 56 @35948 has 12 MA's), (82, 35873), (95, 35816), (100, 35786),

Gene: Peregrin_45 Start: 15804, Stop: 15583, Start Num: 46

Candidate Starts for Peregrin_45:

(Start: 46 @15804 has 7 MA's), (84, 15705), (88, 15690), (95, 15648),

Gene: Pharaoh_61 Start: 40405, Stop: 40172, Start Num: 40

Candidate Starts for Pharaoh_61:

(Start: 38 @40411 has 5 MA's), (Start: 40 @40405 has 4 MA's), (57, 40372), (65, 40357), (93, 40249), (94, 40246), (95, 40240),

Gene: Piatt_67 Start: 44058, Stop: 44297, Start Num: 39

Candidate Starts for Piatt_67:

(6, 43848), (7, 43857), (28, 44007), (Start: 39 @44058 has 58 MA's), (Start: 74 @44130 has 1 MA's), (76, 44133), (94, 44232), (95, 44238),

Gene: Pokerus_67 Start: 44203, Stop: 44442, Start Num: 39

Candidate Starts for Pokerus_67:

(6, 43993), (7, 44002), (28, 44152), (Start: 39 @44203 has 58 MA's), (61, 44248), (Start: 74 @44275 has 1 MA's), (76, 44278), (94, 44377), (95, 44383),

Gene: Quby_90 Start: 56844, Stop: 57011, Start Num: 69

Candidate Starts for Quby_90:

(44, 56799), (57, 56823), (59, 56826), (61, 56829), (69, 56844), (97, 56964),

Gene: QuincyRose_65 Start: 44084, Stop: 44323, Start Num: 39

Candidate Starts for QuincyRose_65:

(6, 43874), (7, 43883), (28, 44033), (Start: 39 @44084 has 58 MA's), (61, 44129), (Start: 74 @44156 has 1 MA's), (76, 44159), (94, 44258), (95, 44264),

Gene: Rabbitrun_73 Start: 44915, Stop: 45124, Start Num: 45

Candidate Starts for Rabbitrun_73:

(Start: 45 @44915 has 2 MA's), (54, 44927), (71, 44957), (90, 45020), (96, 45065),

Gene: Ramen_68 Start: 43708, Stop: 43947, Start Num: 39

Candidate Starts for Ramen_68:

(28, 43657), (Start: 39 @43708 has 58 MA's), (48, 43732), (61, 43753), (Start: 74 @43780 has 1 MA's), (76, 43783), (94, 43882), (95, 43888),

Gene: Rapunzel97_69 Start: 44159, Stop: 44398, Start Num: 39

Candidate Starts for Rapunzel97_69:

(6, 43949), (7, 43958), (28, 44108), (Start: 39 @44159 has 58 MA's), (48, 44183), (61, 44204), (Start: 74 @44231 has 1 MA's), (76, 44234), (94, 44333), (95, 44339),

Gene: Reindeer_4 Start: 2200, Stop: 1967, Start Num: 37

Candidate Starts for Reindeer_4:

(5, 2410), (Start: 37 @2200 has 23 MA's), (65, 2146), (69, 2140), (93, 2038), (95, 2029),

Gene: Rey_6 Start: 2648, Stop: 2400, Start Num: 37

Candidate Starts for Rey_6:

(Start: 37 @2648 has 23 MA's), (65, 2591), (75, 2573), (93, 2471),

Gene: RobinRose_54 Start: 36915, Stop: 36724, Start Num: 56

Candidate Starts for RobinRose_54:

(4, 37188), (8, 37137), (19, 37032), (35, 36957), (Start: 56 @36915 has 12 MA's), (82, 36840), (95, 36783),

Gene: Romm_54 Start: 36915, Stop: 36724, Start Num: 56

Candidate Starts for Romm_54:

(4, 37188), (8, 37137), (19, 37032), (35, 36957), (Start: 56 @36915 has 12 MA's), (82, 36840), (95, 36783),

Gene: Ronaldo_13 Start: 3139, Stop: 2936, Start Num: 46

Candidate Starts for Ronaldo_13:

(Start: 46 @3139 has 7 MA's), (55, 3127), (61, 3115), (70, 3097), (73, 3091), (83, 3052),

Gene: RoseMarie_5 Start: 2362, Stop: 2132, Start Num: 37

Candidate Starts for RoseMarie_5:

(Start: 37 @2362 has 23 MA's), (44, 2344), (65, 2308), (69, 2302), (93, 2203), (95, 2194),

Gene: Rosmarinus_67 Start: 43849, Stop: 44088, Start Num: 39

Candidate Starts for Rosmarinus_67:

(6, 43639), (7, 43648), (28, 43798), (Start: 39 @43849 has 58 MA's), (Start: 74 @43921 has 1 MA's), (76, 43924), (94, 44023), (95, 44029),

Gene: Rossetti_89 Start: 57710, Stop: 57850, Start Num: 78

Candidate Starts for Rossetti_89:

(20, 57545), (24, 57560), (27, 57575), (Start: 40 @57632 has 4 MA's), (Start: 62 @57674 has 19 MA's), (Start: 78 @57710 has 1 MA's), (86, 57749), (92, 57776),

Gene: Rumpelstiltskin_85 Start: 57113, Stop: 57292, Start Num: 62

Candidate Starts for Rumpelstiltskin_85:

(20, 56984), (24, 56999), (26, 57008), (27, 57014), (29, 57023), (Start: 40 @57071 has 4 MA's), (41, 57077), (Start: 58 @57107 has 1 MA's), (Start: 62 @57113 has 19 MA's), (Start: 78 @57152 has 1 MA's), (86, 57191), (92, 57218),

Gene: ScoobyDoobyDoo_50 Start: 17925, Stop: 18128, Start Num: 56
Candidate Starts for ScoobyDoobyDoo_50:
(32, 17868), (Start: 56 @17925 has 12 MA's), (69, 17949), (87, 18018), (104, 18108), (105, 18120),

Gene: Sephiroth_68 Start: 44430, Stop: 44693, Start Num: 31
Candidate Starts for Sephiroth_68:
(Start: 31 @44430 has 4 MA's), (34, 44451), (Start: 36 @44454 has 3 MA's), (43, 44478), (61, 44508),
(80, 44553), (91, 44601), (96, 44637), (97, 44646), (99, 44661), (101, 44664),

Gene: ShiaSurprise_68 Start: 44058, Stop: 44297, Start Num: 39
Candidate Starts for ShiaSurprise_68:
(6, 43848), (7, 43857), (28, 44007), (Start: 39 @44058 has 58 MA's), (Start: 74 @44130 has 1 MA's),
(76, 44133), (94, 44232), (95, 44238),

Gene: Skinny_6 Start: 2365, Stop: 2132, Start Num: 37
Candidate Starts for Skinny_6:
(Start: 37 @2365 has 23 MA's), (44, 2347), (65, 2311), (69, 2305), (93, 2206), (95, 2197),

Gene: SlimJimmy_5 Start: 2365, Stop: 2132, Start Num: 37
Candidate Starts for SlimJimmy_5:
(Start: 37 @2365 has 23 MA's), (44, 2347), (65, 2311), (69, 2305), (93, 2206), (95, 2197),

Gene: Slimphazie_68 Start: 44159, Stop: 44398, Start Num: 39
Candidate Starts for Slimphazie_68:
(6, 43949), (7, 43958), (28, 44108), (Start: 39 @44159 has 58 MA's), (48, 44183), (61, 44204), (Start:
74 @44231 has 1 MA's), (76, 44234), (94, 44333), (95, 44339),

Gene: SpeedDemon_1180 Start: 76063, Stop: 76290, Start Num: 36
Candidate Starts for SpeedDemon_1180:
(Start: 36 @76063 has 3 MA's), (Start: 56 @76102 has 12 MA's), (100, 76261),

Gene: Spock_67 Start: 43862, Stop: 44101, Start Num: 39
Candidate Starts for Spock_67:
(6, 43652), (7, 43661), (28, 43811), (Start: 39 @43862 has 58 MA's), (Start: 74 @43934 has 1 MA's),
(76, 43937), (94, 44036), (95, 44042),

Gene: Syleon_70 Start: 44371, Stop: 44631, Start Num: 31
Candidate Starts for Syleon_70:
(Start: 31 @44371 has 4 MA's), (34, 44392), (Start: 36 @44395 has 3 MA's), (43, 44419), (61, 44449),
(63, 44452), (96, 44575), (99, 44599), (101, 44602),

Gene: Tachez_67 Start: 43706, Stop: 43945, Start Num: 39
Candidate Starts for Tachez_67:
(6, 43496), (7, 43505), (28, 43655), (Start: 39 @43706 has 58 MA's), (Start: 74 @43778 has 1 MA's),
(76, 43781), (94, 43880), (95, 43886),

Gene: Tempo_52 Start: 36794, Stop: 36603, Start Num: 56
Candidate Starts for Tempo_52:
(Start: 56 @36794 has 12 MA's), (82, 36719), (95, 36662),

Gene: Toaka_68 Start: 40924, Stop: 40682, Start Num: 40
Candidate Starts for Toaka_68:
(1, 41545), (2, 41500), (3, 41248), (Start: 40 @40924 has 4 MA's), (49, 40903), (93, 40771),

Gene: Topper_67 Start: 43861, Stop: 44100, Start Num: 39

Candidate Starts for Topper_67:

(6, 43651), (7, 43660), (28, 43810), (Start: 39 @43861 has 58 MA's), (Start: 74 @43933 has 1 MA's), (76, 43936), (94, 44035), (95, 44041),

Gene: Tourach_89 Start: 58025, Stop: 58204, Start Num: 62

Candidate Starts for Tourach_89:

(20, 57896), (24, 57911), (26, 57920), (Start: 40 @57983 has 4 MA's), (Start: 58 @58019 has 1 MA's), (Start: 62 @58025 has 19 MA's), (Start: 78 @58064 has 1 MA's), (79, 58067), (86, 58103), (92, 58130),

Gene: Towmatter_111 Start: 70068, Stop: 70304, Start Num: 36

Candidate Starts for Towmatter_111:

(Start: 36 @70068 has 3 MA's), (43, 70092), (89, 70206), (98, 70272), (100, 70275),

Gene: TpudiCK_6 Start: 2365, Stop: 2132, Start Num: 37

Candidate Starts for TpudiCK_6:

(Start: 37 @2365 has 23 MA's), (44, 2347), (65, 2311), (69, 2305), (93, 2206), (95, 2197),

Gene: Trax_73 Start: 45629, Stop: 45832, Start Num: 45

Candidate Starts for Trax_73:

(Start: 45 @45629 has 2 MA's), (52, 45638), (54, 45641), (Start: 58 @45647 has 1 MA's), (60, 45650), (99, 45800), (101, 45803), (103, 45824),

Gene: TruffulaTree_68 Start: 44155, Stop: 44394, Start Num: 39

Candidate Starts for TruffulaTree_68:

(6, 43945), (7, 43954), (28, 44104), (Start: 39 @44155 has 58 MA's), (48, 44179), (61, 44200), (Start: 74 @44227 has 1 MA's), (76, 44230), (94, 44329), (95, 44335),

Gene: Twitch_67 Start: 43863, Stop: 44102, Start Num: 39

Candidate Starts for Twitch_67:

(6, 43653), (7, 43662), (28, 43812), (Start: 39 @43863 has 58 MA's), (Start: 74 @43935 has 1 MA's), (76, 43938), (94, 44037), (95, 44043),

Gene: TyDawg_5 Start: 2366, Stop: 2133, Start Num: 37

Candidate Starts for TyDawg_5:

(Start: 37 @2366 has 23 MA's), (44, 2348), (65, 2312), (69, 2306), (93, 2207), (95, 2198),

Gene: Underpass_81 Start: 52356, Stop: 52535, Start Num: 62

Candidate Starts for Underpass_81:

(20, 52227), (24, 52242), (26, 52251), (27, 52257), (29, 52266), (Start: 40 @52314 has 4 MA's), (41, 52320), (Start: 58 @52350 has 1 MA's), (Start: 62 @52356 has 19 MA's), (Start: 78 @52395 has 1 MA's), (86, 52434), (92, 52461),

Gene: Validus_72 Start: 44730, Stop: 44951, Start Num: 39

Candidate Starts for Validus_72:

(28, 44679), (Start: 39 @44730 has 58 MA's), (61, 44748), (90, 44838), (93, 44871), (95, 44880),

Gene: Volt_13 Start: 3139, Stop: 2936, Start Num: 46

Candidate Starts for Volt_13:

(Start: 46 @3139 has 7 MA's), (55, 3127), (61, 3115), (70, 3097), (73, 3091), (83, 3052),

Gene: Wigglewigggle_89 Start: 57408, Stop: 57575, Start Num: 62

Candidate Starts for Wigglewigggle_89:

(13, 57243), (16, 57264), (20, 57279), (24, 57294), (Start: 40 @57366 has 4 MA's), (41, 57372), (Start: 58 @57402 has 1 MA's), (Start: 62 @57408 has 19 MA's), (Start: 74 @57432 has 1 MA's), (76, 57435), (91, 57495), (92, 57501), (93, 57519), (94, 57522),

Gene: Wilder_90 Start: 57250, Stop: 57417, Start Num: 62

Candidate Starts for Wilder_90:

(Start: 58 @57244 has 1 MA's), (Start: 62 @57250 has 19 MA's), (Start: 74 @57274 has 1 MA's), (76, 57277), (91, 57337), (92, 57343), (93, 57361), (94, 57364),

Gene: Yecey3_71 Start: 41130, Stop: 40897, Start Num: 40

Candidate Starts for Yecey3_71:

(14, 41235), (15, 41229), (17, 41226), (18, 41223), (22, 41205), (Start: 40 @41130 has 4 MA's), (49, 41109), (51, 41106), (86, 41022), (93, 40977), (94, 40974),

Gene: Zabiza_62 Start: 40011, Stop: 40250, Start Num: 39

Candidate Starts for Zabiza_62:

(28, 39960), (Start: 39 @40011 has 58 MA's), (48, 40035), (61, 40056), (Start: 74 @40083 has 1 MA's), (76, 40086), (94, 40185), (95, 40191),

Gene: Zakai_90 Start: 57893, Stop: 58072, Start Num: 62

Candidate Starts for Zakai_90:

(20, 57764), (24, 57779), (26, 57788), (29, 57803), (Start: 58 @57887 has 1 MA's), (Start: 62 @57893 has 19 MA's), (Start: 78 @57932 has 1 MA's), (79, 57935), (92, 57998),

Gene: Zavala_70 Start: 44433, Stop: 44672, Start Num: 39

Candidate Starts for Zavala_70:

(6, 44223), (7, 44232), (28, 44382), (Start: 39 @44433 has 58 MA's), (48, 44457), (61, 44478), (Start: 74 @44505 has 1 MA's), (76, 44508), (94, 44607), (95, 44613),

Gene: ZhongYanYuan_86 Start: 57300, Stop: 57479, Start Num: 62

Candidate Starts for ZhongYanYuan_86:

(Start: 58 @57294 has 1 MA's), (Start: 62 @57300 has 19 MA's), (Start: 78 @57339 has 1 MA's), (79, 57342), (86, 57378), (92, 57405),

Gene: Ziko_14 Start: 3153, Stop: 2950, Start Num: 46

Candidate Starts for Ziko_14:

(Start: 46 @3153 has 7 MA's), (55, 3141), (61, 3129), (70, 3111), (73, 3105), (83, 3066),