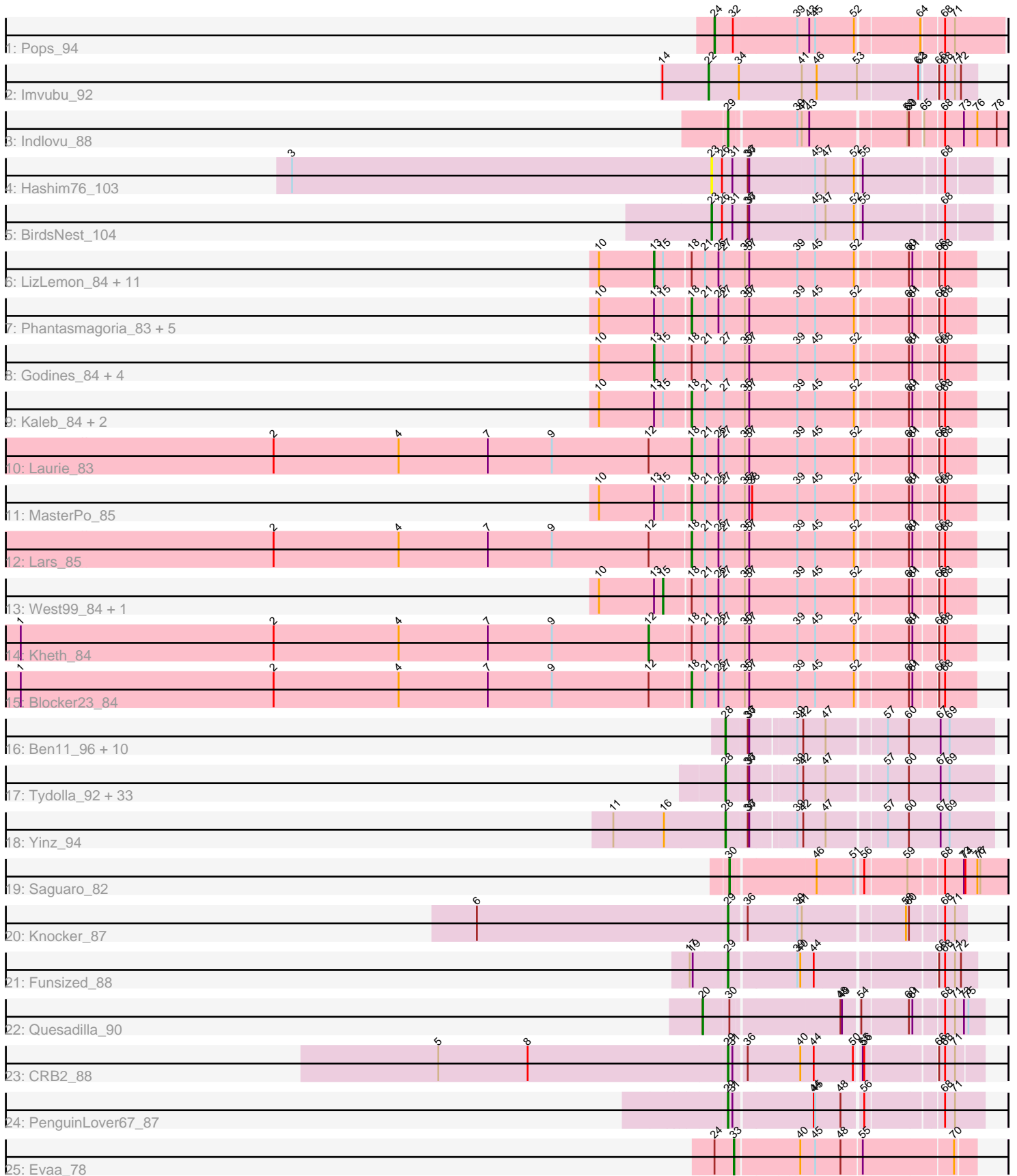


Pham 171372



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 171372 Report

This analysis was run 07/10/24 on database version 566.

Pham number 171372 has 91 members, 6 are drafts.

Phages represented in each track:

- Track 1 : Pops_94
- Track 2 : Imvubu_92
- Track 3 : Indlovu_88
- Track 4 : Hashim76_103
- Track 5 : BirdsNest_104
- Track 6 : LizLemon_84, Sabella_84, Rhinoforte_84, Arbitrator_81, Brownie5_84, Qyrzula_75, Opia_85, Ares_84, FrenchFry_85, Bananafish_85, Tinciduntolum_85, Hedgerow_84
- Track 7 : Phantasmagoria_83, Boyle_84, Calamitous_85, Faze9_83, Coffee_83, Allegro_84
- Track 8 : Godines_84, Glass_86, Rosebush_82, ItsyBitsy1_81, Holeinone_84
- Track 9 : Kaleb_84, Lephleur_84, TA17A_85
- Track 10 : Laurie_83
- Track 11 : MasterPo_85
- Track 12 : Lars_85
- Track 13 : West99_84, Tres_84
- Track 14 : Kheth_84
- Track 15 : Blocker23_84
- Track 16 : Ben11_96, Mortcellus_96, Marley1013_94, Chandler_96, Kronus_96, LestyG_94, Devonte_94, Yahalom_94, Bernardo_93, Casbah_96, Compostia_95
- Track 17 : Tydolla_92, Neos5_95, Gervas_97, SynergyX_97, OrangeOswald_95, Akoma_97, Philly_95, HarveySr_93, RagingRooster_96, Corofin_96, Phlyer_96, SlippinJimmy_99, Audrey_96, GlenHope_97, Rita1961_97, Baloo_95, Briakila_97, Morty007_94, Phayeta_98, Deenasa_97, Heathcliff_96, Abinghost_96, Nozo_96, Obutu_98, MmasiCarm_97, RomaT_96, Daisy_95, Phaedrus_91, Kamiyu_96, Halfpint_96, Pipefish_95, Jackstina_89, ChaChing_96, Athena_98
- Track 18 : Yinz_94
- Track 19 : Saguaro_82
- Track 20 : Knocker_87
- Track 21 : Funsized_88
- Track 22 : Quesadilla_90
- Track 23 : CRB2_88
- Track 24 : PenguinLover67_87
- Track 25 : Evaa_78

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

The start number called the most often in the published annotations is 28, it was called in 43 of the 85 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Abinghost_96, Akoma_97, Athena_98, Audrey_96, Baloo_95, Ben11_96, Bernardo_93, Briakila_97, Casbah_96, ChaChing_96, Chandler_96, Compostia_95, Corofin_96, Daisy_95, Deenasa_97, Devonte_94, Gervas_97, GlenHope_97, Halfpint_96, HarveySr_93, Heathcliff_96, Jackstina_89, Kamiyu_96, Kronus_96, LestyG_94, Marley1013_94, MmasiCarm_97, Mortcellus_96, Morty007_94, Neos5_95, Nozo_96, Obutu_98, OrangeOswald_95, Phaedrus_91, Phayeta_98, Philly_95, Phlyer_96, Pipefish_95, RagingRooster_96, Rita1961_97, RomaT_96, SlippinJimmy_99, SynergyX_97, Tydolla_92, Yahalom_94, Yinz_94,

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

-

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

- Allegro_84, Arbiter_81, Ares_84, Bananafish_85, BirdsNest_104, Blocker23_84, Boyle_84, Brownie5_84, CRB2_88, Calamitous_85, Coffee_83, Evaa_78, Faze9_83, FrenchFry_85, Funsized_88, Glass_86, Godines_84, Hashim76_103, Hedgerow_84, Holeinone_84, Imvubu_92, Indlovu_88, ItsyBitsy1_81, Kaleb_84, Kheth_84, Knocker_87, Lars_85, Laurie_83, Lephleur_84, LizLemon_84, MasterPo_85, Opia_85, PenguinLover67_87, Phantasmagoria_83, Pops_94, Quesadilla_90, Qyrzula_75, Rhinoforte_84, Rosebush_82, Sabella_84, Saguaro_82, TA17A_85, Tinciduntsolum_85, Tres_84, West99_84,

Summary by start number:

Start 12:

- Found in 4 of 91 (4.4%) of genes in pham
- Manual Annotations of this start: 1 of 85
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Kheth_84 (B2),

Start 13:

- Found in 29 of 91 (31.9%) of genes in pham
- Manual Annotations of this start: 17 of 85
- Called 58.6% of time when present
- Phage (with cluster) where this start called: Arbiter_81 (B2), Ares_84 (B2), Bananafish_85 (B2), Brownie5_84 (B2), FrenchFry_85 (B2), Glass_86 (B2), Godines_84 (B2), Hedgerow_84 (B2), Holeinone_84 (B2), ItsyBitsy1_81 (B2), LizLemon_84 (B2), Opia_85 (B2), Qyrzula_75 (B2), Rhinoforte_84 (B2), Rosebush_82 (B2), Sabella_84 (B2), Tinciduntsolum_85 (B2),

Start 15:

- Found in 29 of 91 (31.9%) of genes in pham
- Manual Annotations of this start: 2 of 85
- Called 6.9% of time when present
- Phage (with cluster) where this start called: Tres_84 (B2), West99_84 (B2),

Start 18:

- Found in 33 of 91 (36.3%) of genes in pham
- Manual Annotations of this start: 11 of 85
- Called 39.4% of time when present
- Phage (with cluster) where this start called: Allegro_84 (B2), Blocker23_84 (B2), Boyle_84 (B2), Calamitous_85 (B2), Coffee_83 (B2), Faze9_83 (B2), Kaleb_84 (B2), Lars_85 (B2), Laurie_83 (B2), Lephleur_84 (B2), MasterPo_85 (B2), Phantasmagoria_83 (B2), TA17A_85 (B2),

Start 20:

- Found in 1 of 91 (1.1%) of genes in pham
- Manual Annotations of this start: 1 of 85
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Quesadilla_90 (B9),

Start 22:

- Found in 1 of 91 (1.1%) of genes in pham
- Manual Annotations of this start: 1 of 85
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Imvubu_92 (B10),

Start 23:

- Found in 2 of 91 (2.2%) of genes in pham
- Manual Annotations of this start: 1 of 85
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BirdsNest_104 (B13), Hashim76_103 (B13),

Start 24:

- Found in 2 of 91 (2.2%) of genes in pham
- Manual Annotations of this start: 1 of 85
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Pops_94 (B1),

Start 28:

- Found in 46 of 91 (50.5%) of genes in pham
- Manual Annotations of this start: 43 of 85
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Abinghost_96 (B3), Akoma_97 (B3), Athena_98 (B3), Audrey_96 (B3), Baloo_95 (B3), Ben11_96 (B3), Bernardo_93 (B3), Briakila_97 (B3), Casbah_96 (B3), ChaChing_96 (B3), Chandler_96 (B3), Compostia_95 (B3), Corofin_96 (B3), Daisy_95 (B3), Deenasa_97 (B3), Devonte_94 (B3), Gervas_97 (B3), GlenHope_97 (B3), Halfpint_96 (B3), HarveySr_93 (B3), Heathcliff_96 (B3), Jackstina_89 (B3), Kamiyu_96 (B3), Kronus_96 (B3), LestyG_94 (B3), Marley1013_94 (B3), MmasiCarm_97 (B3), Mortcellus_96 (B3), Morty007_94 (B3), Neos5_95 (B3), Nozo_96 (B3), Obutu_98 (B3), OrangeOswald_95 (B3), Phaedrus_91 (B3), Phayeta_98 (B3), Philly_95 (B3), Phlyer_96 (B3), Pipefish_95 (B3), RagingRooster_96 (B3), Rita1961_97 (B3), RomaT_96 (B3), SlippinJimmy_99 (B3), SynergyX_97 (B3), Tydolla_92 (B3), Yahalom_94 (B3), Yinz_94 (B3),

Start 29:

- Found in 5 of 91 (5.5%) of genes in pham
- Manual Annotations of this start: 5 of 85

- Called 100.0% of time when present
- Phage (with cluster) where this start called: CRB2_88 (B9), Funsized_88 (B9), Indlovu_88 (B11), Knocker_87 (B9), PenguinLover67_87 (B9),

Start 30:

- Found in 2 of 91 (2.2%) of genes in pham
- Manual Annotations of this start: 1 of 85
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Saguario_82 (B7),

Start 33:

- Found in 1 of 91 (1.1%) of genes in pham
- Manual Annotations of this start: 1 of 85
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Evaa_78 (DR),

Summary by clusters:

There are 9 clusters represented in this pham: B2, B11, B7, B1, B10, B3, DR, B9, B13,

Info for manual annotations of cluster B1:

- Start number 24 was manually annotated 1 time for cluster B1.

Info for manual annotations of cluster B10:

- Start number 22 was manually annotated 1 time for cluster B10.

Info for manual annotations of cluster B11:

- Start number 29 was manually annotated 1 time for cluster B11.

Info for manual annotations of cluster B13:

- Start number 23 was manually annotated 1 time for cluster B13.

Info for manual annotations of cluster B2:

- Start number 12 was manually annotated 1 time for cluster B2.
- Start number 13 was manually annotated 17 times for cluster B2.
- Start number 15 was manually annotated 2 times for cluster B2.
- Start number 18 was manually annotated 11 times for cluster B2.

Info for manual annotations of cluster B3:

- Start number 28 was manually annotated 43 times for cluster B3.

Info for manual annotations of cluster B7:

- Start number 30 was manually annotated 1 time for cluster B7.

Info for manual annotations of cluster B9:

- Start number 20 was manually annotated 1 time for cluster B9.
- Start number 29 was manually annotated 4 times for cluster B9.

Info for manual annotations of cluster DR:

- Start number 33 was manually annotated 1 time for cluster DR.

Gene Information:

Gene: Abinghost_96 Start: 65736, Stop: 65248, Start Num: 28

Candidate Starts for Abinghost_96:

(Start: 28 @65736 has 43 MA's), (36, 65697), (37, 65694), (39, 65619), (42, 65610), (47, 65568), (57, 65460), (60, 65418), (67, 65355), (69, 65337),

Gene: Akoma_97 Start: 65813, Stop: 65325, Start Num: 28

Candidate Starts for Akoma_97:

(Start: 28 @65813 has 43 MA's), (36, 65774), (37, 65771), (39, 65696), (42, 65687), (47, 65645), (57, 65537), (60, 65495), (67, 65432), (69, 65414),

Gene: Allegro_84 Start: 63711, Stop: 63181, Start Num: 18

Candidate Starts for Allegro_84:

(10, 63888), (Start: 13 @63777 has 17 MA's), (Start: 15 @63759 has 2 MA's), (Start: 18 @63711 has 11 MA's), (21, 63684), (25, 63657), (27, 63648), (35, 63606), (37, 63597), (39, 63501), (45, 63465), (52, 63393), (60, 63297), (61, 63291), (66, 63249), (68, 63237),

Gene: Arbiter_81 Start: 63817, Stop: 63221, Start Num: 13

Candidate Starts for Arbiter_81:

(10, 63928), (Start: 13 @63817 has 17 MA's), (Start: 15 @63799 has 2 MA's), (Start: 18 @63751 has 11 MA's), (21, 63724), (25, 63697), (27, 63688), (35, 63646), (37, 63637), (39, 63541), (45, 63505), (52, 63433), (60, 63337), (61, 63331), (66, 63289), (68, 63277),

Gene: Ares_84 Start: 63776, Stop: 63180, Start Num: 13

Candidate Starts for Ares_84:

(10, 63887), (Start: 13 @63776 has 17 MA's), (Start: 15 @63758 has 2 MA's), (Start: 18 @63710 has 11 MA's), (21, 63683), (25, 63656), (27, 63647), (35, 63605), (37, 63596), (39, 63500), (45, 63464), (52, 63392), (60, 63296), (61, 63290), (66, 63248), (68, 63236),

Gene: Athena_98 Start: 66509, Stop: 66021, Start Num: 28

Candidate Starts for Athena_98:

(Start: 28 @66509 has 43 MA's), (36, 66470), (37, 66467), (39, 66392), (42, 66383), (47, 66341), (57, 66233), (60, 66191), (67, 66128), (69, 66110),

Gene: Audrey_96 Start: 65763, Stop: 65275, Start Num: 28

Candidate Starts for Audrey_96:

(Start: 28 @65763 has 43 MA's), (36, 65724), (37, 65721), (39, 65646), (42, 65637), (47, 65595), (57, 65487), (60, 65445), (67, 65382), (69, 65364),

Gene: Baloo_95 Start: 65616, Stop: 65128, Start Num: 28

Candidate Starts for Baloo_95:

(Start: 28 @65616 has 43 MA's), (36, 65577), (37, 65574), (39, 65499), (42, 65490), (47, 65448), (57, 65340), (60, 65298), (67, 65235), (69, 65217),

Gene: Bananafish_85 Start: 63713, Stop: 63117, Start Num: 13

Candidate Starts for Bananafish_85:

(10, 63824), (Start: 13 @63713 has 17 MA's), (Start: 15 @63695 has 2 MA's), (Start: 18 @63647 has 11 MA's), (21, 63620), (25, 63593), (27, 63584), (35, 63542), (37, 63533), (39, 63437), (45, 63401), (52, 63329), (60, 63233), (61, 63227), (66, 63185), (68, 63173),

Gene: Ben11_96 Start: 65993, Stop: 65505, Start Num: 28

Candidate Starts for Ben11_96:

(Start: 28 @65993 has 43 MA's), (36, 65954), (37, 65951), (39, 65876), (42, 65867), (47, 65825), (57, 65717), (60, 65675), (67, 65612), (69, 65594),

Gene: Bernardo_93 Start: 65287, Stop: 64799, Start Num: 28

Candidate Starts for Bernardo_93:

(Start: 28 @65287 has 43 MA's), (36, 65248), (37, 65245), (39, 65170), (42, 65161), (47, 65119), (57, 65011), (60, 64969), (67, 64906), (69, 64888),

Gene: BirdsNest_104 Start: 70091, Stop: 69573, Start Num: 23

Candidate Starts for BirdsNest_104:

(Start: 23 @70091 has 1 MA's), (26, 70070), (31, 70049), (36, 70022), (37, 70019), (45, 69890), (47, 69872), (52, 69815), (55, 69806), (68, 69656),

Gene: Blocker23_84 Start: 63711, Stop: 63181, Start Num: 18

Candidate Starts for Blocker23_84:

(1, 65055), (2, 64545), (4, 64293), (7, 64113), (9, 63984), (Start: 12 @63789 has 1 MA's), (Start: 18 @63711 has 11 MA's), (21, 63684), (25, 63657), (27, 63648), (35, 63606), (37, 63597), (39, 63501), (45, 63465), (52, 63393), (60, 63297), (61, 63291), (66, 63249), (68, 63237),

Gene: Boyle_84 Start: 63759, Stop: 63229, Start Num: 18

Candidate Starts for Boyle_84:

(10, 63936), (Start: 13 @63825 has 17 MA's), (Start: 15 @63807 has 2 MA's), (Start: 18 @63759 has 11 MA's), (21, 63732), (25, 63705), (27, 63696), (35, 63654), (37, 63645), (39, 63549), (45, 63513), (52, 63441), (60, 63345), (61, 63339), (66, 63297), (68, 63285),

Gene: Briakila_97 Start: 66267, Stop: 65779, Start Num: 28

Candidate Starts for Briakila_97:

(Start: 28 @66267 has 43 MA's), (36, 66228), (37, 66225), (39, 66150), (42, 66141), (47, 66099), (57, 65991), (60, 65949), (67, 65886), (69, 65868),

Gene: Brownie5_84 Start: 63825, Stop: 63229, Start Num: 13

Candidate Starts for Brownie5_84:

(10, 63936), (Start: 13 @63825 has 17 MA's), (Start: 15 @63807 has 2 MA's), (Start: 18 @63759 has 11 MA's), (21, 63732), (25, 63705), (27, 63696), (35, 63654), (37, 63645), (39, 63549), (45, 63513), (52, 63441), (60, 63345), (61, 63339), (66, 63297), (68, 63285),

Gene: CRB2_88 Start: 67867, Stop: 67412, Start Num: 29

Candidate Starts for CRB2_88:

(5, 68446), (8, 68266), (Start: 29 @67867 has 5 MA's), (31, 67858), (36, 67840), (40, 67735), (44, 67708), (50, 67633), (55, 67624), (56, 67621), (66, 67492), (68, 67480), (71, 67462),

Gene: Calamitous_85 Start: 63642, Stop: 63112, Start Num: 18

Candidate Starts for Calamitous_85:

(10, 63819), (Start: 13 @63708 has 17 MA's), (Start: 15 @63690 has 2 MA's), (Start: 18 @63642 has 11 MA's), (21, 63615), (25, 63588), (27, 63579), (35, 63537), (37, 63528), (39, 63432), (45, 63396), (52, 63324), (60, 63228), (61, 63222), (66, 63180), (68, 63168),

Gene: Casbah_96 Start: 66078, Stop: 65590, Start Num: 28

Candidate Starts for Casbah_96:

(Start: 28 @66078 has 43 MA's), (36, 66039), (37, 66036), (39, 65961), (42, 65952), (47, 65910), (57, 65802), (60, 65760), (67, 65697), (69, 65679),

Gene: ChaChing_96 Start: 65776, Stop: 65288, Start Num: 28

Candidate Starts for ChaChing_96:

(Start: 28 @65776 has 43 MA's), (36, 65737), (37, 65734), (39, 65659), (42, 65650), (47, 65608), (57, 65500), (60, 65458), (67, 65395), (69, 65377),

Gene: Chandler_96 Start: 66552, Stop: 66064, Start Num: 28

Candidate Starts for Chandler_96:

(Start: 28 @66552 has 43 MA's), (36, 66513), (37, 66510), (39, 66435), (42, 66426), (47, 66384), (57, 66276), (60, 66234), (67, 66171), (69, 66153),

Gene: Coffee_83 Start: 63752, Stop: 63222, Start Num: 18

Candidate Starts for Coffee_83:

(10, 63929), (Start: 13 @63818 has 17 MA's), (Start: 15 @63800 has 2 MA's), (Start: 18 @63752 has 11 MA's), (21, 63725), (25, 63698), (27, 63689), (35, 63647), (37, 63638), (39, 63542), (45, 63506), (52, 63434), (60, 63338), (61, 63332), (66, 63290), (68, 63278),

Gene: Compostia_95 Start: 66230, Stop: 65742, Start Num: 28

Candidate Starts for Compostia_95:

(Start: 28 @66230 has 43 MA's), (36, 66191), (37, 66188), (39, 66113), (42, 66104), (47, 66062), (57, 65954), (60, 65912), (67, 65849), (69, 65831),

Gene: Corofin_96 Start: 65787, Stop: 65299, Start Num: 28

Candidate Starts for Corofin_96:

(Start: 28 @65787 has 43 MA's), (36, 65748), (37, 65745), (39, 65670), (42, 65661), (47, 65619), (57, 65511), (60, 65469), (67, 65406), (69, 65388),

Gene: Daisy_95 Start: 65336, Stop: 64848, Start Num: 28

Candidate Starts for Daisy_95:

(Start: 28 @65336 has 43 MA's), (36, 65297), (37, 65294), (39, 65219), (42, 65210), (47, 65168), (57, 65060), (60, 65018), (67, 64955), (69, 64937),

Gene: Deenasa_97 Start: 66990, Stop: 66502, Start Num: 28

Candidate Starts for Deenasa_97:

(Start: 28 @66990 has 43 MA's), (36, 66951), (37, 66948), (39, 66873), (42, 66864), (47, 66822), (57, 66714), (60, 66672), (67, 66609), (69, 66591),

Gene: Devonte_94 Start: 65402, Stop: 64914, Start Num: 28

Candidate Starts for Devonte_94:

(Start: 28 @65402 has 43 MA's), (36, 65363), (37, 65360), (39, 65285), (42, 65276), (47, 65234), (57, 65126), (60, 65084), (67, 65021), (69, 65003),

Gene: Evaa_78 Start: 57578, Stop: 57129, Start Num: 33

Candidate Starts for Evaa_78:

(Start: 24 @57617 has 1 MA's), (Start: 33 @57578 has 1 MA's), (40, 57455), (45, 57431), (48, 57380), (55, 57341), (70, 57167),

Gene: Faze9_83 Start: 63774, Stop: 63244, Start Num: 18

Candidate Starts for Faze9_83:

(10, 63951), (Start: 13 @63840 has 17 MA's), (Start: 15 @63822 has 2 MA's), (Start: 18 @63774 has 11 MA's), (21, 63747), (25, 63720), (27, 63711), (35, 63669), (37, 63660), (39, 63564), (45, 63528), (52, 63456), (60, 63360), (61, 63354), (66, 63312), (68, 63300),

Gene: FrenchFry_85 Start: 63827, Stop: 63231, Start Num: 13

Candidate Starts for FrenchFry_85:

(10, 63938), (Start: 13 @63827 has 17 MA's), (Start: 15 @63809 has 2 MA's), (Start: 18 @63761 has 11 MA's), (21, 63734), (25, 63707), (27, 63698), (35, 63656), (37, 63647), (39, 63551), (45, 63515), (52, 63443), (60, 63347), (61, 63341), (66, 63299), (68, 63287),

Gene: Funsized_88 Start: 68273, Stop: 67824, Start Num: 29

Candidate Starts for Funsized_88:

(17, 68339), (19, 68333), (Start: 29 @68273 has 5 MA's), (39, 68144), (40, 68138), (44, 68114), (66, 67898), (68, 67886), (71, 67868), (72, 67856),

Gene: Gervas_97 Start: 66231, Stop: 65743, Start Num: 28

Candidate Starts for Gervas_97:

(Start: 28 @66231 has 43 MA's), (36, 66192), (37, 66189), (39, 66114), (42, 66105), (47, 66063), (57, 65955), (60, 65913), (67, 65850), (69, 65832),

Gene: Glass_86 Start: 63834, Stop: 63238, Start Num: 13

Candidate Starts for Glass_86:

(10, 63945), (Start: 13 @63834 has 17 MA's), (Start: 15 @63816 has 2 MA's), (Start: 18 @63768 has 11 MA's), (21, 63741), (27, 63705), (35, 63663), (37, 63654), (39, 63558), (45, 63522), (52, 63450), (60, 63354), (61, 63348), (66, 63306), (68, 63294),

Gene: GlenHope_97 Start: 65806, Stop: 65318, Start Num: 28

Candidate Starts for GlenHope_97:

(Start: 28 @65806 has 43 MA's), (36, 65767), (37, 65764), (39, 65689), (42, 65680), (47, 65638), (57, 65530), (60, 65488), (67, 65425), (69, 65407),

Gene: Godines_84 Start: 63740, Stop: 63144, Start Num: 13

Candidate Starts for Godines_84:

(10, 63851), (Start: 13 @63740 has 17 MA's), (Start: 15 @63722 has 2 MA's), (Start: 18 @63674 has 11 MA's), (21, 63647), (27, 63611), (35, 63569), (37, 63560), (39, 63464), (45, 63428), (52, 63356), (60, 63260), (61, 63254), (66, 63212), (68, 63200),

Gene: Halfpint_96 Start: 65551, Stop: 65063, Start Num: 28

Candidate Starts for Halfpint_96:

(Start: 28 @65551 has 43 MA's), (36, 65512), (37, 65509), (39, 65434), (42, 65425), (47, 65383), (57, 65275), (60, 65233), (67, 65170), (69, 65152),

Gene: HarveySr_93 Start: 64875, Stop: 64387, Start Num: 28

Candidate Starts for HarveySr_93:

(Start: 28 @64875 has 43 MA's), (36, 64836), (37, 64833), (39, 64758), (42, 64749), (47, 64707), (57, 64599), (60, 64557), (67, 64494), (69, 64476),

Gene: Hashim76_103 Start: 69243, Stop: 68725, Start Num: 23

Candidate Starts for Hashim76_103:

(3, 70089), (Start: 23 @69243 has 1 MA's), (26, 69222), (31, 69201), (36, 69174), (37, 69171), (45, 69042), (47, 69024), (52, 68967), (55, 68958), (68, 68808),

Gene: Heathcliff_96 Start: 65730, Stop: 65242, Start Num: 28

Candidate Starts for Heathcliff_96:

(Start: 28 @65730 has 43 MA's), (36, 65691), (37, 65688), (39, 65613), (42, 65604), (47, 65562), (57, 65454), (60, 65412), (67, 65349), (69, 65331),

Gene: Hedgerow_84 Start: 63791, Stop: 63195, Start Num: 13

Candidate Starts for Hedgerow_84:

(10, 63902), (Start: 13 @63791 has 17 MA's), (Start: 15 @63773 has 2 MA's), (Start: 18 @63725 has 11 MA's), (21, 63698), (25, 63671), (27, 63662), (35, 63620), (37, 63611), (39, 63515), (45, 63479), (52, 63407), (60, 63311), (61, 63305), (66, 63263), (68, 63251),

Gene: Holeinone_84 Start: 63681, Stop: 63085, Start Num: 13

Candidate Starts for Holeinone_84:

(10, 63792), (Start: 13 @63681 has 17 MA's), (Start: 15 @63663 has 2 MA's), (Start: 18 @63615 has 11 MA's), (21, 63588), (27, 63552), (35, 63510), (37, 63501), (39, 63405), (45, 63369), (52, 63297), (60, 63201), (61, 63195), (66, 63153), (68, 63141),

Gene: Imvubu_92 Start: 66340, Stop: 65831, Start Num: 22

Candidate Starts for Imvubu_92:

(14, 66430), (Start: 22 @66340 has 1 MA's), (34, 66280), (41, 66154), (46, 66127), (53, 66049), (62, 65932), (63, 65929), (66, 65905), (68, 65893), (71, 65875), (72, 65863),

Gene: Indlovu_88 Start: 67222, Stop: 66713, Start Num: 29

Candidate Starts for Indlovu_88:

(Start: 29 @67222 has 5 MA's), (39, 67096), (41, 67087), (43, 67075), (59, 66898), (60, 66895), (65, 66874), (68, 66838), (73, 66802), (76, 66775), (78, 66736),

Gene: ItsyBitsy1_81 Start: 63908, Stop: 63312, Start Num: 13

Candidate Starts for ItsyBitsy1_81:

(10, 64019), (Start: 13 @63908 has 17 MA's), (Start: 15 @63890 has 2 MA's), (Start: 18 @63842 has 11 MA's), (21, 63815), (27, 63779), (35, 63737), (37, 63728), (39, 63632), (45, 63596), (52, 63524), (60, 63428), (61, 63422), (66, 63380), (68, 63368),

Gene: Jackstina_89 Start: 65647, Stop: 65159, Start Num: 28

Candidate Starts for Jackstina_89:

(Start: 28 @65647 has 43 MA's), (36, 65608), (37, 65605), (39, 65530), (42, 65521), (47, 65479), (57, 65371), (60, 65329), (67, 65266), (69, 65248),

Gene: Kaleb_84 Start: 63771, Stop: 63241, Start Num: 18

Candidate Starts for Kaleb_84:

(10, 63948), (Start: 13 @63837 has 17 MA's), (Start: 15 @63819 has 2 MA's), (Start: 18 @63771 has 11 MA's), (21, 63744), (27, 63708), (35, 63666), (37, 63657), (39, 63561), (45, 63525), (52, 63453), (60, 63357), (61, 63351), (66, 63309), (68, 63297),

Gene: Kamiyu_96 Start: 65734, Stop: 65246, Start Num: 28

Candidate Starts for Kamiyu_96:

(Start: 28 @65734 has 43 MA's), (36, 65695), (37, 65692), (39, 65617), (42, 65608), (47, 65566), (57, 65458), (60, 65416), (67, 65353), (69, 65335),

Gene: Kheth_84 Start: 63754, Stop: 63146, Start Num: 12

Candidate Starts for Kheth_84:

(1, 65020), (2, 64510), (4, 64258), (7, 64078), (9, 63949), (Start: 12 @63754 has 1 MA's), (Start: 18 @63676 has 11 MA's), (21, 63649), (25, 63622), (27, 63613), (35, 63571), (37, 63562), (39, 63466), (45, 63430), (52, 63358), (60, 63262), (61, 63256), (66, 63214), (68, 63202),

Gene: Knocker_87 Start: 67165, Stop: 66737, Start Num: 29

Candidate Starts for Knocker_87:

(6, 67660), (Start: 29 @67165 has 5 MA's), (36, 67135), (39, 67036), (41, 67027), (58, 66841), (60, 66835), (68, 66778), (71, 66760),

Gene: Kronus_96 Start: 66819, Stop: 66331, Start Num: 28

Candidate Starts for Kronus_96:

(Start: 28 @66819 has 43 MA's), (36, 66780), (37, 66777), (39, 66702), (42, 66693), (47, 66651), (57, 66543), (60, 66501), (67, 66438), (69, 66420),

Gene: Lars_85 Start: 63740, Stop: 63210, Start Num: 18

Candidate Starts for Lars_85:

(2, 64574), (4, 64322), (7, 64142), (9, 64013), (Start: 12 @63818 has 1 MA's), (Start: 18 @63740 has 11 MA's), (21, 63713), (25, 63686), (27, 63677), (35, 63635), (37, 63626), (39, 63530), (45, 63494), (52, 63422), (60, 63326), (61, 63320), (66, 63278), (68, 63266),

Gene: Laurie_83 Start: 63078, Stop: 62548, Start Num: 18

Candidate Starts for Laurie_83:

(2, 63918), (4, 63666), (7, 63486), (9, 63357), (Start: 12 @63162 has 1 MA's), (Start: 18 @63078 has 11 MA's), (21, 63051), (25, 63024), (27, 63015), (35, 62973), (37, 62964), (39, 62868), (45, 62832), (52, 62760), (60, 62664), (61, 62658), (66, 62616), (68, 62604),

Gene: Lephleur_84 Start: 63596, Stop: 63066, Start Num: 18

Candidate Starts for Lephleur_84:

(10, 63773), (Start: 13 @63662 has 17 MA's), (Start: 15 @63644 has 2 MA's), (Start: 18 @63596 has 11 MA's), (21, 63569), (27, 63533), (35, 63491), (37, 63482), (39, 63386), (45, 63350), (52, 63278), (60, 63182), (61, 63176), (66, 63134), (68, 63122),

Gene: LestyG_94 Start: 65305, Stop: 64817, Start Num: 28

Candidate Starts for LestyG_94:

(Start: 28 @65305 has 43 MA's), (36, 65266), (37, 65263), (39, 65188), (42, 65179), (47, 65137), (57, 65029), (60, 64987), (67, 64924), (69, 64906),

Gene: LizLemon_84 Start: 63833, Stop: 63237, Start Num: 13

Candidate Starts for LizLemon_84:

(10, 63944), (Start: 13 @63833 has 17 MA's), (Start: 15 @63815 has 2 MA's), (Start: 18 @63767 has 11 MA's), (21, 63740), (25, 63713), (27, 63704), (35, 63662), (37, 63653), (39, 63557), (45, 63521), (52, 63449), (60, 63353), (61, 63347), (66, 63305), (68, 63293),

Gene: Marley1013_94 Start: 66265, Stop: 65777, Start Num: 28

Candidate Starts for Marley1013_94:

(Start: 28 @66265 has 43 MA's), (36, 66226), (37, 66223), (39, 66148), (42, 66139), (47, 66097), (57, 65989), (60, 65947), (67, 65884), (69, 65866),

Gene: MasterPo_85 Start: 63636, Stop: 63106, Start Num: 18

Candidate Starts for MasterPo_85:

(10, 63813), (Start: 13 @63702 has 17 MA's), (Start: 15 @63684 has 2 MA's), (Start: 18 @63636 has 11 MA's), (21, 63609), (25, 63582), (27, 63573), (35, 63531), (37, 63522), (38, 63516), (39, 63426), (45, 63390), (52, 63318), (60, 63222), (61, 63216), (66, 63174), (68, 63162),

Gene: MmasiCarm_97 Start: 66162, Stop: 65674, Start Num: 28

Candidate Starts for MmasiCarm_97:

(Start: 28 @66162 has 43 MA's), (36, 66123), (37, 66120), (39, 66045), (42, 66036), (47, 65994), (57, 65886), (60, 65844), (67, 65781), (69, 65763),

Gene: Mortcellus_96 Start: 66900, Stop: 66412, Start Num: 28

Candidate Starts for Mortcellus_96:

(Start: 28 @66900 has 43 MA's), (36, 66861), (37, 66858), (39, 66783), (42, 66774), (47, 66732), (57, 66624), (60, 66582), (67, 66519), (69, 66501),

Gene: Morty007_94 Start: 66532, Stop: 66044, Start Num: 28

Candidate Starts for Morty007_94:

(Start: 28 @66532 has 43 MA's), (36, 66493), (37, 66490), (39, 66415), (42, 66406), (47, 66364), (57, 66256), (60, 66214), (67, 66151), (69, 66133),

Gene: Neos5_95 Start: 65988, Stop: 65500, Start Num: 28

Candidate Starts for Neos5_95:

(Start: 28 @65988 has 43 MA's), (36, 65949), (37, 65946), (39, 65871), (42, 65862), (47, 65820), (57, 65712), (60, 65670), (67, 65607), (69, 65589),

Gene: Nozo_96 Start: 66541, Stop: 66053, Start Num: 28

Candidate Starts for Nozo_96:

(Start: 28 @66541 has 43 MA's), (36, 66502), (37, 66499), (39, 66424), (42, 66415), (47, 66373), (57, 66265), (60, 66223), (67, 66160), (69, 66142),

Gene: Obutu_98 Start: 66345, Stop: 65857, Start Num: 28

Candidate Starts for Obutu_98:

(Start: 28 @66345 has 43 MA's), (36, 66306), (37, 66303), (39, 66228), (42, 66219), (47, 66177), (57, 66069), (60, 66027), (67, 65964), (69, 65946),

Gene: Opia_85 Start: 63726, Stop: 63130, Start Num: 13

Candidate Starts for Opia_85:

(10, 63837), (Start: 13 @63726 has 17 MA's), (Start: 15 @63708 has 2 MA's), (Start: 18 @63660 has 11 MA's), (21, 63633), (25, 63606), (27, 63597), (35, 63555), (37, 63546), (39, 63450), (45, 63414), (52, 63342), (60, 63246), (61, 63240), (66, 63198), (68, 63186),

Gene: OrangeOswald_95 Start: 65776, Stop: 65288, Start Num: 28

Candidate Starts for OrangeOswald_95:

(Start: 28 @65776 has 43 MA's), (36, 65737), (37, 65734), (39, 65659), (42, 65650), (47, 65608), (57, 65500), (60, 65458), (67, 65395), (69, 65377),

Gene: PenguinLover67_87 Start: 65234, Stop: 64770, Start Num: 29

Candidate Starts for PenguinLover67_87:

(Start: 29 @65234 has 5 MA's), (31, 65225), (44, 65075), (45, 65072), (48, 65024), (56, 64988), (68, 64847), (71, 64829),

Gene: Phaedrus_91 Start: 65191, Stop: 64703, Start Num: 28

Candidate Starts for Phaedrus_91:

(Start: 28 @65191 has 43 MA's), (36, 65152), (37, 65149), (39, 65074), (42, 65065), (47, 65023), (57, 64915), (60, 64873), (67, 64810), (69, 64792),

Gene: Phantasmagoria_83 Start: 63643, Stop: 63113, Start Num: 18

Candidate Starts for Phantasmagoria_83:

(10, 63820), (Start: 13 @63709 has 17 MA's), (Start: 15 @63691 has 2 MA's), (Start: 18 @63643 has 11 MA's), (21, 63616), (25, 63589), (27, 63580), (35, 63538), (37, 63529), (39, 63433), (45, 63397), (52, 63325), (60, 63229), (61, 63223), (66, 63181), (68, 63169),

Gene: Phayeta_98 Start: 66026, Stop: 65538, Start Num: 28

Candidate Starts for Phayeta_98:

(Start: 28 @66026 has 43 MA's), (36, 65987), (37, 65984), (39, 65909), (42, 65900), (47, 65858), (57, 65750), (60, 65708), (67, 65645), (69, 65627),

Gene: Philly_95 Start: 65624, Stop: 65136, Start Num: 28

Candidate Starts for Philly_95:

(Start: 28 @65624 has 43 MA's), (36, 65585), (37, 65582), (39, 65507), (42, 65498), (47, 65456), (57, 65348), (60, 65306), (67, 65243), (69, 65225),

Gene: Phlyer_96 Start: 66486, Stop: 65998, Start Num: 28

Candidate Starts for Phlyer_96:

(Start: 28 @66486 has 43 MA's), (36, 66447), (37, 66444), (39, 66369), (42, 66360), (47, 66318), (57, 66210), (60, 66168), (67, 66105), (69, 66087),

Gene: Pipefish_95 Start: 66160, Stop: 65672, Start Num: 28

Candidate Starts for Pipefish_95:

(Start: 28 @66160 has 43 MA's), (36, 66121), (37, 66118), (39, 66043), (42, 66034), (47, 65992), (57, 65884), (60, 65842), (67, 65779), (69, 65761),

Gene: Pops_94 Start: 66731, Stop: 66201, Start Num: 24

Candidate Starts for Pops_94:

(Start: 24 @66731 has 1 MA's), (32, 66698), (39, 66572), (43, 66551), (45, 66539), (52, 66467), (64, 66353), (68, 66314), (71, 66296),

Gene: Quesadilla_90 Start: 66835, Stop: 66329, Start Num: 20

Candidate Starts for Quesadilla_90:

(Start: 20 @66835 has 1 MA's), (Start: 30 @66787 has 1 MA's), (48, 66583), (49, 66580), (54, 66553), (60, 66463), (61, 66457), (68, 66406), (71, 66388), (73, 66370), (75, 66361),

Gene: Qyrzula_75 Start: 63848, Stop: 63252, Start Num: 13

Candidate Starts for Qyrzula_75:

(10, 63959), (Start: 13 @63848 has 17 MA's), (Start: 15 @63830 has 2 MA's), (Start: 18 @63782 has 11 MA's), (21, 63755), (25, 63728), (27, 63719), (35, 63677), (37, 63668), (39, 63572), (45, 63536), (52, 63464), (60, 63368), (61, 63362), (66, 63320), (68, 63308),

Gene: RagingRooster_96 Start: 65772, Stop: 65284, Start Num: 28

Candidate Starts for RagingRooster_96:

(Start: 28 @65772 has 43 MA's), (36, 65733), (37, 65730), (39, 65655), (42, 65646), (47, 65604), (57, 65496), (60, 65454), (67, 65391), (69, 65373),

Gene: Rhinoforte_84 Start: 63745, Stop: 63149, Start Num: 13

Candidate Starts for Rhinoforte_84:

(10, 63856), (Start: 13 @63745 has 17 MA's), (Start: 15 @63727 has 2 MA's), (Start: 18 @63679 has 11 MA's), (21, 63652), (25, 63625), (27, 63616), (35, 63574), (37, 63565), (39, 63469), (45, 63433), (52, 63361), (60, 63265), (61, 63259), (66, 63217), (68, 63205),

Gene: Rita1961_97 Start: 66117, Stop: 65629, Start Num: 28

Candidate Starts for Rita1961_97:

(Start: 28 @66117 has 43 MA's), (36, 66078), (37, 66075), (39, 66000), (42, 65991), (47, 65949), (57, 65841), (60, 65799), (67, 65736), (69, 65718),

Gene: RomaT_96 Start: 66340, Stop: 65852, Start Num: 28

Candidate Starts for RomaT_96:

(Start: 28 @66340 has 43 MA's), (36, 66301), (37, 66298), (39, 66223), (42, 66214), (47, 66172), (57, 66064), (60, 66022), (67, 65959), (69, 65941),

Gene: Rosebush_82 Start: 63817, Stop: 63221, Start Num: 13

Candidate Starts for Rosebush_82:

(10, 63928), (Start: 13 @63817 has 17 MA's), (Start: 15 @63799 has 2 MA's), (Start: 18 @63751 has 11 MA's), (21, 63724), (27, 63688), (35, 63646), (37, 63637), (39, 63541), (45, 63505), (52, 63433), (60, 63337), (61, 63331), (66, 63289), (68, 63277),

Gene: Sabella_84 Start: 63653, Stop: 63057, Start Num: 13

Candidate Starts for Sabella_84:

(10, 63764), (Start: 13 @63653 has 17 MA's), (Start: 15 @63635 has 2 MA's), (Start: 18 @63587 has 11 MA's), (21, 63560), (25, 63533), (27, 63524), (35, 63482), (37, 63473), (39, 63377), (45, 63341), (52, 63269), (60, 63173), (61, 63167), (66, 63125), (68, 63113),

Gene: Saguaro_82 Start: 64421, Stop: 63921, Start Num: 30

Candidate Starts for Saguaro_82:

(Start: 30 @64421 has 1 MA's), (46, 64265), (51, 64196), (56, 64184), (59, 64103), (68, 64043), (73, 64007), (74, 64004), (76, 63980), (77, 63974),

Gene: SlippinJimmy_99 Start: 67140, Stop: 66652, Start Num: 28

Candidate Starts for SlippinJimmy_99:

(Start: 28 @67140 has 43 MA's), (36, 67101), (37, 67098), (39, 67023), (42, 67014), (47, 66972), (57, 66864), (60, 66822), (67, 66759), (69, 66741),

Gene: SynergyX_97 Start: 66082, Stop: 65594, Start Num: 28

Candidate Starts for SynergyX_97:

(Start: 28 @66082 has 43 MA's), (36, 66043), (37, 66040), (39, 65965), (42, 65956), (47, 65914), (57, 65806), (60, 65764), (67, 65701), (69, 65683),

Gene: TA17A_85 Start: 63594, Stop: 63064, Start Num: 18

Candidate Starts for TA17A_85:

(10, 63771), (Start: 13 @63660 has 17 MA's), (Start: 15 @63642 has 2 MA's), (Start: 18 @63594 has 11 MA's), (21, 63567), (27, 63531), (35, 63489), (37, 63480), (39, 63384), (45, 63348), (52, 63276), (60, 63180), (61, 63174), (66, 63132), (68, 63120),

Gene: Tinciduntolum_85 Start: 63824, Stop: 63228, Start Num: 13

Candidate Starts for Tinciduntolum_85:

(10, 63935), (Start: 13 @63824 has 17 MA's), (Start: 15 @63806 has 2 MA's), (Start: 18 @63758 has 11 MA's), (21, 63731), (25, 63704), (27, 63695), (35, 63653), (37, 63644), (39, 63548), (45, 63512), (52, 63440), (60, 63344), (61, 63338), (66, 63296), (68, 63284),

Gene: Tres_84 Start: 63660, Stop: 63079, Start Num: 15

Candidate Starts for Tres_84:

(10, 63789), (Start: 13 @63678 has 17 MA's), (Start: 15 @63660 has 2 MA's), (Start: 18 @63609 has 11 MA's), (21, 63582), (25, 63555), (27, 63546), (35, 63504), (37, 63495), (39, 63399), (45, 63363), (52, 63291), (60, 63195), (61, 63189), (66, 63147), (68, 63135),

Gene: Tydolla_92 Start: 65758, Stop: 65270, Start Num: 28

Candidate Starts for Tydolla_92:

(Start: 28 @65758 has 43 MA's), (36, 65719), (37, 65716), (39, 65641), (42, 65632), (47, 65590), (57, 65482), (60, 65440), (67, 65377), (69, 65359),

Gene: West99_84 Start: 63829, Stop: 63251, Start Num: 15

Candidate Starts for West99_84:

(10, 63958), (Start: 13 @63847 has 17 MA's), (Start: 15 @63829 has 2 MA's), (Start: 18 @63781 has 11 MA's), (21, 63754), (25, 63727), (27, 63718), (35, 63676), (37, 63667), (39, 63571), (45, 63535), (52, 63463), (60, 63367), (61, 63361), (66, 63319), (68, 63307),

Gene: Yahalom_94 Start: 65583, Stop: 65095, Start Num: 28

Candidate Starts for Yahalom_94:

(Start: 28 @65583 has 43 MA's), (36, 65544), (37, 65541), (39, 65466), (42, 65457), (47, 65415), (57, 65307), (60, 65265), (67, 65202), (69, 65184),

Gene: Yinz_94 Start: 65180, Stop: 64692, Start Num: 28

Candidate Starts for Yinz_94:

(11, 65402), (16, 65300), (Start: 28 @65180 has 43 MA's), (36, 65141), (37, 65138), (39, 65063), (42, 65054), (47, 65012), (57, 64904), (60, 64862), (67, 64799), (69, 64781),