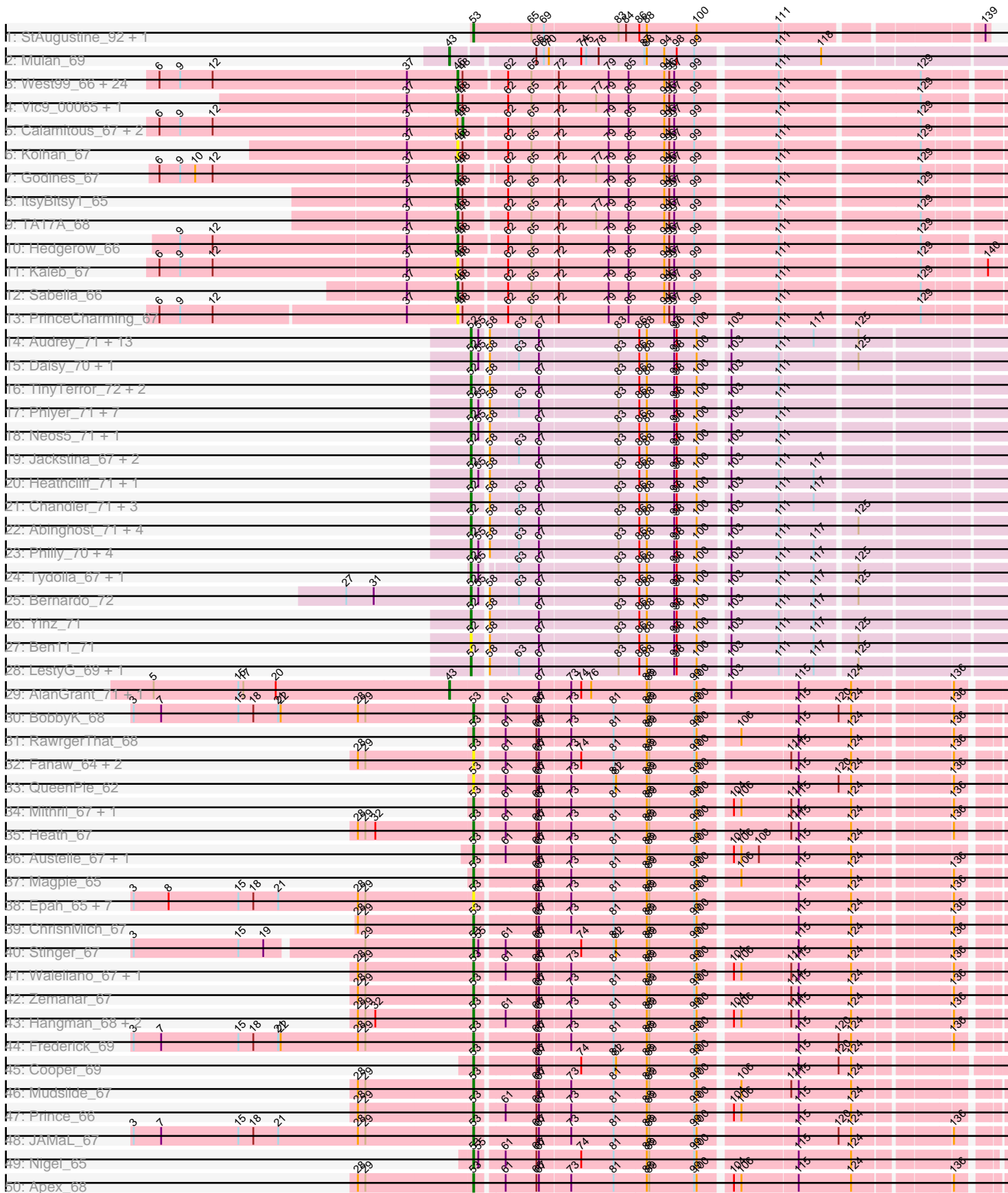
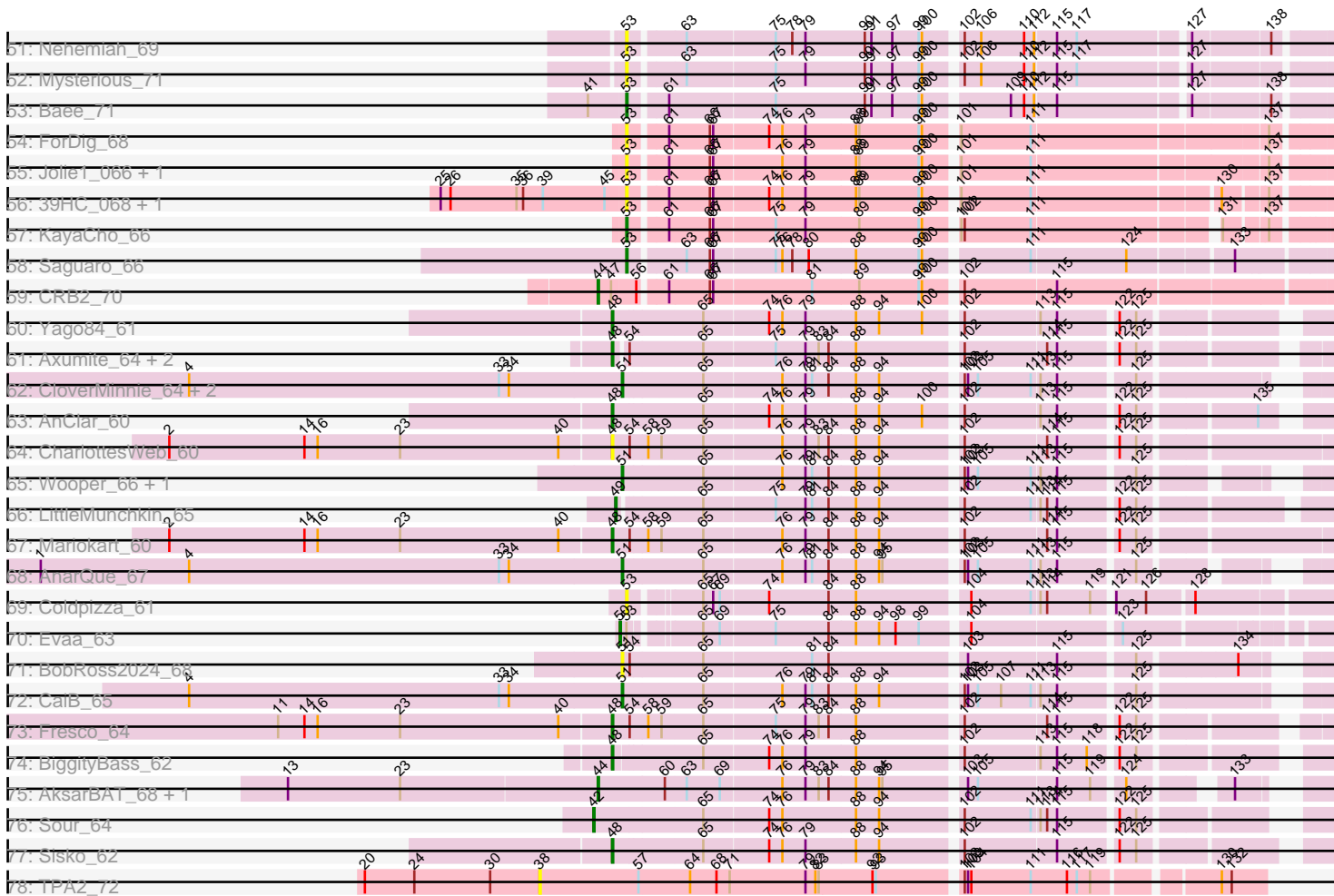


Pham 224328



Pham 224328



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 224328 Report

This analysis was run 03/28/25 on database version 593.

Pham number 224328 has 169 members, 40 are drafts.

Phages represented in each track:

- Track 1 : StAugustine_92, Causa_96
- Track 2 : Mulan_69
- Track 3 : West99_66, Allegro_66, Kheth_66, Tres_66, Ares_66, Qyrzula_60, Glass_67, Blocker23_66, Bananafish_67, LizLemon_66, Rhinoforte_66, Lars_67, Coffee_66, MasterPo_67, Lephleur_66, Holeinone_66, FrenchFry_67, Brownie5_66, Eaglehorse_66, Arbiter_64, Rosebush_65, Opia_67, LilSmirk_66, Phantasmagoria_65, Tinciduntolum_67
- Track 4 : Vic9_00065, Laurie_66
- Track 5 : Calamitous_67, Faze9_65, Boyle_66
- Track 6 : Kolhan_67
- Track 7 : Godines_67
- Track 8 : ItsyBitsy1_65
- Track 9 : TA17A_68
- Track 10 : Hedgerow_66
- Track 11 : Kaleb_67
- Track 12 : Sabella_66
- Track 13 : PrinceCharming_67
- Track 14 : Audrey_71, Athena_73, Baloo_70, Marlia_72, Yahalom_69, Briakila_71, Corofin_71, RomaT_71, Halfpint_70, SlippinJimmy_74, ChaChing_71, SwainyDoc_72, Gervas_72, Devonte_70
- Track 15 : Daisy_70, SynergyX_71
- Track 16 : TinyTerror_72, MmasiCarm_72, Rita1961_72
- Track 17 : Phlyer_71, Compostia_70, Kronus_71, GlenHope_72, Shenandoah_70, RagingRooster_70, Morty007_70, Marley1013_72
- Track 18 : Neos5_71, Chentzyk_73
- Track 19 : Jackstina_67, Phayeta_74, Mortcellus_71
- Track 20 : Heathcliff_71, Olivio_71
- Track 21 : Chandler_71, Gadget_72, Chalmers_70, Obutu_73
- Track 22 : Abinghost_71, Akoma_71, Nozo_71, OrangeOswald_71, Deenasa_71
- Track 23 : Philly_70, Casbah_71, Kamiyu_71, Phaedrus_66, Glubnar_71
- Track 24 : Tydolla_67, HarveySr_70
- Track 25 : Bernardo_72
- Track 26 : Yinz_71
- Track 27 : Ben11_71
- Track 28 : LestyG_69, Pipefish_74
- Track 29 : AlanGrant_71, Vincenzo_70
- Track 30 : BobbyK_68

- Track 31 : RawrgerThat_68
- Track 32 : Fanaw_64, JaguarMi_68, Xincheng_67
- Track 33 : QueenPie_62
- Track 34 : Mithril_67, Fortunato_68
- Track 35 : Heath_67
- Track 36 : Austelle_67, VioletZ_69
- Track 37 : Magpie_65
- Track 38 : Epah_65, Nanao_66, Poster_65, Hally898_65, Antihero_65, Ahwei_65, Lambano_65, GinPorsche_65
- Track 39 : ChrisnMich_67
- Track 40 : Stinger_67
- Track 41 : Waleliano_67, Lolalove_69
- Track 42 : Zemanar_67
- Track 43 : Hangman_68, BrownCNA_69, Hydro_68
- Track 44 : Frederick_69
- Track 45 : Cooper_69
- Track 46 : Mudslide_67
- Track 47 : Prince_66
- Track 48 : JAMaL_67
- Track 49 : Nigel_65
- Track 50 : Apex_68
- Track 51 : Nehemiah_69
- Track 52 : Mysterious_71
- Track 53 : Baee_71
- Track 54 : ForDig_68
- Track 55 : Jolie1_066, Hosp_064
- Track 56 : 39HC_068, 40BC_068
- Track 57 : KayaCho_66
- Track 58 : Saguaro_66
- Track 59 : CRB2_70
- Track 60 : Yago84_61
- Track 61 : Axumite_64, Ligma_64, Shatter_64
- Track 62 : CloverMinnie_64, MakoManhole_62, MossRose_65
- Track 63 : AnClar_60
- Track 64 : CharlottesWeb_60
- Track 65 : Wooper_66, Yeshua_66
- Track 66 : LittleMunchkin_65
- Track 67 : Mariokart_60
- Track 68 : AnarQue_67
- Track 69 : Coldpizza_61
- Track 70 : Evaa_63
- Track 71 : BobRoss2024_68
- Track 72 : CaiB_65
- Track 73 : Fresco_64
- Track 74 : BiggityBass_62
- Track 75 : AksarBAT_68, NHagos_62
- Track 76 : Sour_64
- Track 77 : Sisko_62
- Track 78 : TPA2_72

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

The start number called the most often in the published annotations is 52, it was called in 45 of the 129 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Abinghost_71, Akoma_71, Athena_73, Audrey_71, Baloo_70, Ben11_71, Bernardo_72, Briakila_71, Casbah_71, ChaChing_71, Chalmers_70, Chandler_71, Chentzyk_73, Compostia_70, Corofin_71, Daisy_70, Deenasa_71, Devonte_70, Gadget_72, Gervas_72, GlenHope_72, Glubnar_71, Halfpint_70, HarveySr_70, Heathcliff_71, Jackstina_67, Kamiyu_71, Kronus_71, LestyG_69, Marley1013_72, Marlia_72, MmasiCarm_72, Mortcellus_71, Morty007_70, Neos5_71, Nozo_71, Obutu_73, Olivio_71, OrangeOswald_71, Phaedrus_66, Phayeta_74, Philly_70, Phlyer_71, Pipefish_74, RagingRooster_70, Rita1961_72, RomaT_71, Shenandoah_70, SlippinJimmy_74, SwainyDoc_72, SynergyX_71, TinyTerror_72, Tydolla_67, Yahalom_69, Yinz_71,

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

-

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

- 39HC_068, 40BC_068, Ahwei_65, AksarBAT_68, AlanGrant_71, Allegro_66, AnClar_60, AnarQue_67, Antihero_65, Apex_68, Arbiter_64, Ares_66, Austelle_67, Axumite_64, Bae_71, Bananafish_67, BiggityBass_62, Blocker23_66, BobRoss2024_68, BobbyK_68, Boyle_66, BrownCNA_69, Brownie5_66, CRB2_70, CaiB_65, Calamitous_67, Causa_96, CharlottesWeb_60, ChrisnMich_67, CloverMinnie_64, Coffee_66, Coldpizza_61, Cooper_69, Eaglehorse_66, Epah_65, Evaa_63, Fanaw_64, Faze9_65, ForDig_68, Fortunato_68, Frederick_69, FrenchFry_67, Fresco_64, GinPorsche_65, Glass_67, Godines_67, Hally898_65, Hangman_68, Heath_67, Hedgerow_66, Holeinone_66, Hosp_064, Hydro_68, ItsyBitsy1_65, JAMaL_67, JaguarMi_68, Jolie1_066, Kaleb_67, KayaCho_66, Kheth_66, Kolhan_67, Lambano_65, Lars_67, Laurie_66, Lephleur_66, Ligma_64, LilSmirk_66, LittleMunchkin_65, LizLemon_66, Lolalove_69, Magpie_65, MakoManhole_62, Mariokart_60, MasterPo_67, Mithril_67, MossRose_65, Mudslide_67, Mulan_69, Mysterious_71, NHagos_62, Nanao_66, Nehemiah_69, Nigel_65, Opia_67, Phantasmagoria_65, Poster_65, PrinceCharming_67, Prince_66, QueenPie_62, Qyrzula_60, RawrgerThat_68, Rhinoforte_66, Rosebush_65, Sabella_66, Saguaro_66, Shatter_64, Sisko_62, Sour_64, StAugustine_92, Stinger_67, TA17A_68, TPA2_72, Tinciduntolum_67, Tres_66, Vic9_00065, Vincenzo_70, VioletZ_69, Waleliano_67, West99_66, Wooper_66, Xincheng_67, Yago84_61, Yeshua_66, Zemanar_67,

Summary by start number:

Start 38:

- Found in 1 of 169 (0.6%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: TPA2_72 (singleton),

Start 42:

- Found in 1 of 169 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 129
- Called 100.0% of time when present

- Phage (with cluster) where this start called: Sour_64 (DR),

Start 43:

- Found in 3 of 169 (1.8%) of genes in pham
- Manual Annotations of this start: 3 of 129
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AlanGrant_71 (B4), Mulan_69 (B1), Vincenzo_70 (B4),

Start 44:

- Found in 3 of 169 (1.8%) of genes in pham
- Manual Annotations of this start: 2 of 129
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AksarBAT_68 (DR), CRB2_70 (B9), NHagos_62 (DR),

Start 46:

- Found in 38 of 169 (22.5%) of genes in pham
- Manual Annotations of this start: 31 of 129
- Called 92.1% of time when present
- Phage (with cluster) where this start called: Allegro_66 (B2), Arbiter_64 (B2), Ares_66 (B2), Bananafish_67 (B2), Blocker23_66 (B2), Brownie5_66 (B2), Coffee_66 (B2), Eaglehorse_66 (B2), FrenchFry_67 (B2), Glass_67 (B2), Godines_67 (B2), Hedgerow_66 (B2), Holeinone_66 (B2), ItsyBitsy1_65 (B2), Kaleb_67 (B2), Kheth_66 (B2), Kolhan_67 (B2), Lars_67 (B2), Laurie_66 (B2), Lephleur_66 (B2), LilSmirk_66 (B2), LizLemon_66 (B2), MasterPo_67 (B2), Opia_67 (B2), Phantasmagoria_65 (B2), PrinceCharming_67 (B2), Qyrzula_60 (B2), Rhinoforte_66 (B2), Rosebush_65 (B2), Sabella_66 (B2), TA17A_68 (B2), Tinciduntolum_67 (B2), Tres_66 (B2), Vic9_00065 (B2), West99_66 (B2),

Start 48:

- Found in 48 of 169 (28.4%) of genes in pham
- Manual Annotations of this start: 12 of 129
- Called 27.1% of time when present
- Phage (with cluster) where this start called: AnClar_60 (DR), Axumite_64 (DR), BiggityBass_62 (DR), Boyle_66 (B2), Calamitous_67 (B2), CharlottesWeb_60 (DR), Faze9_65 (B2), Fresco_64 (DR), Ligma_64 (DR), Mariokart_60 (DR), Shatter_64 (DR), Sisko_62 (DR), Yago84_61 (DR),

Start 49:

- Found in 1 of 169 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 129
- Called 100.0% of time when present
- Phage (with cluster) where this start called: LittleMunchkin_65 (DR),

Start 50:

- Found in 1 of 169 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 129
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Evaa_63 (DR),

Start 51:

- Found in 8 of 169 (4.7%) of genes in pham

- Manual Annotations of this start: 6 of 129
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AnarQue_67 (DR), BobRoss2024_68 (DR), CaiB_65 (DR), CloverMinnie_64 (DR), MakoManhole_62 (DR), MossRose_65 (DR), Wooper_66 (DR), Yeshua_66 (DR),

Start 52:

- Found in 55 of 169 (32.5%) of genes in pham
- Manual Annotations of this start: 45 of 129
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Abinghost_71 (B3), Akoma_71 (B3), Athena_73 (B3), Audrey_71 (B3), Baloo_70 (B3), Ben11_71 (B3), Bernardo_72 (B3), Briakila_71 (B3), Casbah_71 (B3), ChaChing_71 (B3), Chalmers_70 (B3), Chandler_71 (B3), Chentzyk_73 (B3), Compostia_70 (B3), Corofin_71 (B3), Daisy_70 (B3), Deenasa_71 (B3), Devonte_70 (B3), Gadjet_72 (B3), Gervas_72 (B3), GlenHope_72 (B3), Glubnar_71 (B3), Halfpint_70 (B3), HarveySr_70 (B3), Heathcliff_71 (B3), Jackstina_67 (B3), Kamiyu_71 (B3), Kronus_71 (B3), LestyG_69 (B3), Marley1013_72 (B3), Marlia_72 (B3), MmasiCarm_72 (B3), Mortcellus_71 (B3), Morty007_70 (B3), Neos5_71 (B3), Nozo_71 (B3), Obutu_73 (B3), Olivio_71 (B3), OrangeOswald_71 (B3), Phaedrus_66 (B3), Phayeta_74 (B3), Philly_70 (B3), Phlyer_71 (B3), Pipefish_74 (B3), RagingRooster_70 (B3), Rita1961_72 (B3), RomaT_71 (B3), Shenandoah_70 (B3), SlippinJimmy_74 (B3), SwainyDoc_72 (B3), SynergyX_71 (B3), TinyTerror_72 (B3), Tydolla_67 (B3), Yahalom_69 (B3), Yinz_71 (B3),

Start 53:

- Found in 49 of 169 (29.0%) of genes in pham
- Manual Annotations of this start: 27 of 129
- Called 98.0% of time when present
- Phage (with cluster) where this start called: 39HC_068 (B6), 40BC_068 (B6), Ahwei_65 (B4), Antihero_65 (B4), Apex_68 (B4), Austelle_67 (B4), Bae_71 (B5), BobbyK_68 (B4), BrownCNA_69 (B4), Causa_96 (AI), ChrisnMich_67 (B4), Coldpizza_61 (DR), Cooper_69 (B4), Epah_65 (B4), Fanaw_64 (B4), ForDig_68 (B6), Fortunato_68 (B4), Frederick_69 (B4), GinPorsche_65 (B4), Hally898_65 (B4), Hangman_68 (B4), Heath_67 (B4), Hosp_064 (B6), Hydro_68 (B4), JAMaL_67 (B4), JaguarMi_68 (B4), Jolie1_066 (B6), KayaCho_66 (B6), Lambano_65 (B4), Lolalove_69 (B4), Magpie_65 (B4), Mithril_67 (B4), Mudslide_67 (B4), Mysterious_71 (B5), Nanao_66 (B4), Nehemiah_69 (B5), Nigel_65 (B4), Poster_65 (B4), Prince_66 (B4), QueenPie_62 (B4), RawrgerThat_68 (B4), Saguaro_66 (B7), StAugustine_92 (AI), Stinger_67 (B4), VioletZ_69 (B4), Waleliano_67 (B4), Xincheng_67 (B4), Zemanar_67 (B4),

Summary by clusters:

There are 11 clusters represented in this pham: singleton, AI, B4, B5, B6, B7, B1, B2, B3, DR, B9,

Info for manual annotations of cluster AI:

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

Info for manual annotations of cluster B1:

- Start number 43 was manually annotated 1 time for cluster B1.

Info for manual annotations of cluster B2:

- Start number 46 was manually annotated 31 times for cluster B2.
- Start number 48 was manually annotated 3 times for cluster B2.

Info for manual annotations of cluster B3:

- Start number 52 was manually annotated 45 times for cluster B3.

Info for manual annotations of cluster B4:

- Start number 43 was manually annotated 2 times for cluster B4.
- Start number 53 was manually annotated 23 times for cluster B4.

Info for manual annotations of cluster B5:

- Start number 53 was manually annotated 1 time for cluster B5.

Info for manual annotations of cluster B6:

- Start number 53 was manually annotated 1 time for cluster B6.

Info for manual annotations of cluster B7:

- Start number 53 was manually annotated 1 time for cluster B7.

Info for manual annotations of cluster B9:

- Start number 44 was manually annotated 1 time for cluster B9.

Info for manual annotations of cluster DR:

- Start number 42 was manually annotated 1 time for cluster DR.
- Start number 44 was manually annotated 1 time for cluster DR.
- Start number 48 was manually annotated 9 times for cluster DR.
- Start number 49 was manually annotated 1 time for cluster DR.
- Start number 50 was manually annotated 1 time for cluster DR.
- Start number 51 was manually annotated 6 times for cluster DR.

Gene Information:

Gene: 39HC_068 Start: 58083, Stop: 58772, Start Num: 53

Candidate Starts for 39HC_068:

(25, 57918), (26, 57927), (35, 57987), (36, 57993), (39, 58011), (45, 58065), (Start: 53 @58083 has 27 MA's), (61, 58113), (66, 58149), (67, 58152), (74, 58200), (76, 58212), (79, 58233), (88, 58278), (89, 58281), (99, 58335), (100, 58338), (101, 58362), (111, 58425), (130, 58581), (137, 58614),

Gene: 40BC_068 Start: 58083, Stop: 58772, Start Num: 53

Candidate Starts for 40BC_068:

(25, 57918), (26, 57927), (35, 57987), (36, 57993), (39, 58011), (45, 58065), (Start: 53 @58083 has 27 MA's), (61, 58113), (66, 58149), (67, 58152), (74, 58200), (76, 58212), (79, 58233), (88, 58278), (89, 58281), (99, 58335), (100, 58338), (101, 58362), (111, 58425), (130, 58581), (137, 58614),

Gene: Abinghost_71 Start: 57879, Stop: 58478, Start Num: 52

Candidate Starts for Abinghost_71:

(Start: 52 @57879 has 45 MA's), (58, 57894), (63, 57924), (67, 57948), (83, 58041), (86, 58065), (88, 58074), (97, 58107), (98, 58110), (100, 58134), (103, 58164), (111, 58221), (125, 58305),

Gene: Ahwei_65 Start: 58476, Stop: 59063, Start Num: 53

Candidate Starts for Ahwei_65:

(3, 58071), (8, 58113), (15, 58197), (18, 58215), (21, 58245), (28, 58341), (29, 58350), (Start: 53 @58476 has 27 MA's), (66, 58542), (67, 58545), (73, 58581), (81, 58632), (88, 58671), (89, 58674), (99, 58728), (100, 58731), (115, 58839), (124, 58902), (136, 59004),

Gene: Akoma_71 Start: 57919, Stop: 58518, Start Num: 52

Candidate Starts for Akoma_71:

(Start: 52 @57919 has 45 MA's), (58, 57934), (63, 57964), (67, 57988), (83, 58081), (86, 58105), (88, 58114), (97, 58147), (98, 58150), (100, 58174), (103, 58204), (111, 58261), (125, 58345),

Gene: AksarBAT_68 Start: 53011, Stop: 53595, Start Num: 44

Candidate Starts for AksarBAT_68:

(13, 52732), (23, 52834), (Start: 44 @53011 has 2 MA's), (60, 53071), (63, 53089), (69, 53119), (76, 53173), (79, 53194), (83, 53206), (84, 53215), (88, 53239), (94, 53260), (95, 53263), (103, 53329), (105, 53338), (115, 53407), (119, 53437), (124, 53461), (133, 53530),

Gene: AlanGrant_71 Start: 60795, Stop: 61415, Start Num: 43

Candidate Starts for AlanGrant_71:

(5, 60447), (15, 60546), (17, 60552), (20, 60591), (Start: 43 @60795 has 3 MA's), (67, 60891), (73, 60927), (74, 60939), (76, 60951), (88, 61017), (89, 61020), (99, 61074), (100, 61077), (103, 61107), (115, 61185), (124, 61248), (136, 61350),

Gene: Allegro_66 Start: 56167, Stop: 56817, Start Num: 46

Candidate Starts for Allegro_66:

(6, 55813), (9, 55837), (12, 55876), (37, 56107), (Start: 46 @56167 has 31 MA's), (Start: 48 @56173 has 12 MA's), (62, 56218), (65, 56245), (72, 56275), (79, 56335), (85, 56359), (94, 56401), (96, 56407), (97, 56413), (99, 56437), (111, 56527), (129, 56683),

Gene: AnClar_60 Start: 52491, Stop: 53087, Start Num: 48

Candidate Starts for AnClar_60:

(Start: 48 @52491 has 12 MA's), (65, 52569), (74, 52626), (76, 52638), (79, 52659), (88, 52704), (94, 52725), (100, 52764), (102, 52791), (113, 52857), (115, 52872), (122, 52920), (125, 52935), (135, 53031),

Gene: AnarQue_67 Start: 53185, Stop: 53751, Start Num: 51

Candidate Starts for AnarQue_67:

(1, 52657), (4, 52792), (33, 53074), (34, 53083), (Start: 51 @53185 has 6 MA's), (65, 53254), (76, 53323), (79, 53344), (81, 53350), (84, 53365), (88, 53389), (94, 53410), (95, 53413), (102, 53476), (103, 53479), (105, 53488), (111, 53536), (113, 53542), (115, 53557), (125, 53620),

Gene: Antihero_65 Start: 58474, Stop: 59061, Start Num: 53

Candidate Starts for Antihero_65:

(3, 58069), (8, 58111), (15, 58195), (18, 58213), (21, 58243), (28, 58339), (29, 58348), (Start: 53 @58474 has 27 MA's), (66, 58540), (67, 58543), (73, 58579), (81, 58630), (88, 58669), (89, 58672), (99, 58726), (100, 58729), (115, 58837), (124, 58900), (136, 59002),

Gene: Apex_68 Start: 59579, Stop: 60166, Start Num: 53

Candidate Starts for Apex_68:

(28, 59444), (29, 59453), (Start: 53 @59579 has 27 MA's), (61, 59609), (66, 59645), (67, 59648), (73, 59684), (81, 59735), (88, 59774), (89, 59777), (99, 59831), (100, 59834), (104, 59867), (106, 59876), (115, 59942), (124, 60005), (136, 60107),

Gene: Arbiter_64 Start: 56199, Stop: 56852, Start Num: 46

Candidate Starts for Arbiter_64:

(6, 55845), (9, 55869), (12, 55908), (37, 56139), (Start: 46 @56199 has 31 MA's), (Start: 48 @56205 has 12 MA's), (62, 56253), (65, 56280), (72, 56310), (79, 56370), (85, 56394), (94, 56436), (96, 56442), (97, 56448), (99, 56472), (111, 56562), (129, 56718),

Gene: Ares_66 Start: 56170, Stop: 56823, Start Num: 46

Candidate Starts for Ares_66:

(6, 55816), (9, 55840), (12, 55879), (37, 56110), (Start: 46 @56170 has 31 MA's), (Start: 48 @56176 has 12 MA's), (62, 56224), (65, 56251), (72, 56281), (79, 56341), (85, 56365), (94, 56407), (96, 56413), (97, 56419), (99, 56443), (111, 56533), (129, 56689),

Gene: Athena_73 Start: 58654, Stop: 59253, Start Num: 52

Candidate Starts for Athena_73:

(Start: 52 @58654 has 45 MA's), (55, 58663), (58, 58669), (63, 58699), (67, 58723), (83, 58816), (86, 58840), (88, 58849), (97, 58882), (98, 58885), (100, 58909), (103, 58939), (111, 58996), (117, 59035), (125, 59080),

Gene: Audrey_71 Start: 57918, Stop: 58517, Start Num: 52

Candidate Starts for Audrey_71:

(Start: 52 @57918 has 45 MA's), (55, 57927), (58, 57933), (63, 57963), (67, 57987), (83, 58080), (86, 58104), (88, 58113), (97, 58146), (98, 58149), (100, 58173), (103, 58203), (111, 58260), (117, 58299), (125, 58344),

Gene: Austelle_67 Start: 60096, Stop: 60683, Start Num: 53

Candidate Starts for Austelle_67:

(Start: 53 @60096 has 27 MA's), (61, 60126), (66, 60162), (67, 60165), (73, 60201), (81, 60252), (88, 60291), (89, 60294), (99, 60348), (100, 60351), (104, 60384), (106, 60393), (108, 60414), (115, 60459), (124, 60522),

Gene: Axumite_64 Start: 51329, Stop: 51919, Start Num: 48

Candidate Starts for Axumite_64:

(Start: 48 @51329 has 12 MA's), (54, 51338), (65, 51401), (75, 51464), (79, 51491), (83, 51503), (84, 51512), (88, 51536), (102, 51623), (114, 51695), (115, 51704), (122, 51752), (125, 51767),

Gene: Bae_71 Start: 60200, Stop: 60841, Start Num: 53

Candidate Starts for Bae_71:

(41, 60167), (Start: 53 @60200 has 27 MA's), (61, 60230), (75, 60323), (90, 60404), (91, 60410), (97, 60428), (99, 60452), (100, 60455), (109, 60524), (110, 60536), (112, 60545), (115, 60563), (127, 60671), (138, 60737),

Gene: Baloo_70 Start: 57751, Stop: 58350, Start Num: 52

Candidate Starts for Baloo_70:

(Start: 52 @57751 has 45 MA's), (55, 57760), (58, 57766), (63, 57796), (67, 57820), (83, 57913), (86, 57937), (88, 57946), (97, 57979), (98, 57982), (100, 58006), (103, 58036), (111, 58093), (117, 58132), (125, 58177),

Gene: Bananafish_67 Start: 56100, Stop: 56753, Start Num: 46

Candidate Starts for Bananafish_67:

(6, 55746), (9, 55770), (12, 55809), (37, 56040), (Start: 46 @56100 has 31 MA's), (Start: 48 @56106 has 12 MA's), (62, 56154), (65, 56181), (72, 56211), (79, 56271), (85, 56295), (94, 56337), (96, 56343), (97, 56349), (99, 56373), (111, 56463), (129, 56619),

Gene: Ben11_71 Start: 58136, Stop: 58735, Start Num: 52

Candidate Starts for Ben11_71:

(Start: 52 @58136 has 45 MA's), (58, 58151), (67, 58205), (83, 58298), (86, 58322), (88, 58331), (97, 58364), (98, 58367), (100, 58391), (103, 58421), (111, 58478), (117, 58517), (125, 58562),

Gene: Bernardo_72 Start: 58117, Stop: 58716, Start Num: 52

Candidate Starts for Bernardo_72:

(27, 57967), (31, 58000), (Start: 52 @58117 has 45 MA's), (55, 58126), (58, 58132), (63, 58162), (67, 58186), (83, 58279), (86, 58303), (88, 58312), (97, 58345), (98, 58348), (100, 58372), (103, 58402), (111, 58459), (117, 58498), (125, 58543),

Gene: BiggityBass_62 Start: 53047, Stop: 53640, Start Num: 48

Candidate Starts for BiggityBass_62:

(Start: 48 @53047 has 12 MA's), (65, 53122), (74, 53179), (76, 53191), (79, 53212), (88, 53257), (102, 53344), (113, 53410), (115, 53425), (118, 53452), (122, 53473), (125, 53488),

Gene: Blocker23_66 Start: 56167, Stop: 56817, Start Num: 46

Candidate Starts for Blocker23_66:

(6, 55813), (9, 55837), (12, 55876), (37, 56107), (Start: 46 @56167 has 31 MA's), (Start: 48 @56173 has 12 MA's), (62, 56218), (65, 56245), (72, 56275), (79, 56335), (85, 56359), (94, 56401), (96, 56407), (97, 56413), (99, 56437), (111, 56527), (129, 56683),

Gene: BobRoss2024_68 Start: 52748, Stop: 53359, Start Num: 51

Candidate Starts for BobRoss2024_68:

(Start: 51 @52748 has 6 MA's), (54, 52754), (65, 52817), (81, 52913), (84, 52928), (103, 53042), (115, 53120), (125, 53183), (134, 53264),

Gene: BobbyK_68 Start: 59356, Stop: 59943, Start Num: 53

Candidate Starts for BobbyK_68:

(3, 58951), (7, 58984), (15, 59077), (18, 59095), (21, 59125), (22, 59128), (28, 59221), (29, 59230), (Start: 53 @59356 has 27 MA's), (61, 59386), (66, 59422), (67, 59425), (73, 59461), (81, 59512), (88, 59551), (89, 59554), (99, 59608), (100, 59611), (115, 59719), (120, 59767), (124, 59782), (136, 59884),

Gene: Boyle_66 Start: 56214, Stop: 56861, Start Num: 48

Candidate Starts for Boyle_66:

(6, 55854), (9, 55878), (12, 55917), (37, 56148), (Start: 46 @56208 has 31 MA's), (Start: 48 @56214 has 12 MA's), (62, 56262), (65, 56289), (72, 56319), (79, 56379), (85, 56403), (94, 56445), (96, 56451), (97, 56457), (99, 56481), (111, 56571), (129, 56727),

Gene: Briakila_71 Start: 58117, Stop: 58716, Start Num: 52

Candidate Starts for Briakila_71:

(Start: 52 @58117 has 45 MA's), (55, 58126), (58, 58132), (63, 58162), (67, 58186), (83, 58279), (86, 58303), (88, 58312), (97, 58345), (98, 58348), (100, 58372), (103, 58402), (111, 58459), (117, 58498), (125, 58543),

Gene: BrownCNA_69 Start: 59733, Stop: 60320, Start Num: 53

Candidate Starts for BrownCNA_69:

(28, 59598), (29, 59607), (32, 59619), (Start: 53 @59733 has 27 MA's), (61, 59763), (66, 59799), (67, 59802), (73, 59838), (81, 59889), (88, 59928), (89, 59931), (99, 59985), (100, 59988), (104, 60021), (106, 60030), (114, 60087), (115, 60096), (124, 60159), (136, 60261),

Gene: Brownie5_66 Start: 56210, Stop: 56863, Start Num: 46

Candidate Starts for Brownie5_66:

(6, 55856), (9, 55880), (12, 55919), (37, 56150), (Start: 46 @56210 has 31 MA's), (Start: 48 @56216 has 12 MA's), (62, 56264), (65, 56291), (72, 56321), (79, 56381), (85, 56405), (94, 56447), (96, 56453), (97, 56459), (99, 56483), (111, 56573), (129, 56729),

Gene: CRB2_70 Start: 60958, Stop: 61668, Start Num: 44

Candidate Starts for CRB2_70:

(Start: 44 @60958 has 2 MA's), (47, 60970), (56, 60991), (61, 61012), (66, 61048), (67, 61051), (81, 61138), (89, 61180), (99, 61234), (100, 61237), (102, 61264), (115, 61345),

Gene: CaiB_65 Start: 52969, Stop: 53550, Start Num: 51

Candidate Starts for CaiB_65:

(4, 52576), (33, 52858), (34, 52867), (Start: 51 @52969 has 6 MA's), (65, 53038), (76, 53107), (79, 53128), (81, 53134), (84, 53149), (88, 53173), (94, 53194), (102, 53260), (103, 53263), (105, 53272), (107, 53293), (111, 53320), (113, 53326), (115, 53341), (125, 53404),

Gene: Calamitous_67 Start: 56104, Stop: 56751, Start Num: 48

Candidate Starts for Calamitous_67:

(6, 55744), (9, 55768), (12, 55807), (37, 56038), (Start: 46 @56098 has 31 MA's), (Start: 48 @56104 has 12 MA's), (62, 56152), (65, 56179), (72, 56209), (79, 56269), (85, 56293), (94, 56335), (96, 56341), (97, 56347), (99, 56371), (111, 56461), (129, 56617),

Gene: Casbah_71 Start: 58238, Stop: 58837, Start Num: 52

Candidate Starts for Casbah_71:

(Start: 52 @58238 has 45 MA's), (55, 58247), (58, 58253), (63, 58283), (67, 58307), (83, 58400), (86, 58424), (88, 58433), (97, 58466), (98, 58469), (100, 58493), (103, 58523), (111, 58580), (117, 58619),

Gene: Causa_96 Start: 67664, Stop: 68245, Start Num: 53

Candidate Starts for Causa_96:

(Start: 53 @67664 has 27 MA's), (65, 67733), (69, 67748), (83, 67835), (84, 67844), (86, 67859), (88, 67868), (100, 67928), (111, 68027), (139, 68240),

Gene: ChaChing_71 Start: 57936, Stop: 58535, Start Num: 52

Candidate Starts for ChaChing_71:

(Start: 52 @57936 has 45 MA's), (55, 57945), (58, 57951), (63, 57981), (67, 58005), (83, 58098), (86, 58122), (88, 58131), (97, 58164), (98, 58167), (100, 58191), (103, 58221), (111, 58278), (117, 58317), (125, 58362),

Gene: Chalmers_70 Start: 58369, Stop: 58968, Start Num: 52

Candidate Starts for Chalmers_70:

(Start: 52 @58369 has 45 MA's), (58, 58384), (63, 58414), (67, 58438), (83, 58531), (86, 58555), (88, 58564), (97, 58597), (98, 58600), (100, 58624), (103, 58654), (111, 58711), (117, 58750),

Gene: Chandler_71 Start: 58698, Stop: 59297, Start Num: 52

Candidate Starts for Chandler_71:

(Start: 52 @58698 has 45 MA's), (58, 58713), (63, 58743), (67, 58767), (83, 58860), (86, 58884), (88, 58893), (97, 58926), (98, 58929), (100, 58953), (103, 58983), (111, 59040), (117, 59079),

Gene: CharlottesWeb_60 Start: 49910, Stop: 50527, Start Num: 48

Candidate Starts for CharlottesWeb_60:

(2, 49511), (14, 49634), (16, 49646), (23, 49721), (40, 49865), (Start: 48 @49910 has 12 MA's), (54, 49925), (58, 49940), (59, 49952), (65, 49988), (76, 50057), (79, 50078), (83, 50090), (84, 50099), (88, 50123), (94, 50144), (102, 50210), (114, 50282), (115, 50291), (122, 50339), (125, 50354),

Gene: Chentzyk_73 Start: 58869, Stop: 59468, Start Num: 52

Candidate Starts for Chentzyk_73:

(Start: 52 @58869 has 45 MA's), (55, 58878), (58, 58884), (67, 58938), (83, 59031), (86, 59055), (88, 59064), (97, 59097), (98, 59100), (100, 59124), (103, 59154), (111, 59211),

Gene: ChrisnMich_67 Start: 58458, Stop: 59045, Start Num: 53

Candidate Starts for ChrisnMich_67:

(28, 58323), (29, 58332), (Start: 53 @58458 has 27 MA's), (66, 58524), (67, 58527), (73, 58563), (81, 58614), (88, 58653), (89, 58656), (99, 58710), (100, 58713), (115, 58821), (124, 58884), (136, 58986),

Gene: CloverMinnie_64 Start: 52132, Stop: 52713, Start Num: 51

Candidate Starts for CloverMinnie_64:

(4, 51739), (33, 52021), (34, 52030), (Start: 51 @52132 has 6 MA's), (65, 52201), (76, 52270), (79, 52291), (81, 52297), (84, 52312), (88, 52336), (94, 52357), (102, 52423), (103, 52426), (105, 52435), (111, 52483), (113, 52489), (115, 52504), (125, 52567),

Gene: Coffee_66 Start: 56202, Stop: 56855, Start Num: 46

Candidate Starts for Coffee_66:

(6, 55848), (9, 55872), (12, 55911), (37, 56142), (Start: 46 @56202 has 31 MA's), (Start: 48 @56208 has 12 MA's), (62, 56256), (65, 56283), (72, 56313), (79, 56373), (85, 56397), (94, 56439), (96, 56445), (97, 56451), (99, 56475), (111, 56565), (129, 56721),

Gene: Coldpizza_61 Start: 52645, Stop: 53241, Start Num: 53

Candidate Starts for Coldpizza_61:

(Start: 53 @52645 has 27 MA's), (65, 52699), (67, 52708), (69, 52714), (74, 52756), (84, 52810), (88, 52834), (104, 52927), (111, 52981), (113, 52987), (114, 52993), (119, 53032), (121, 53047), (126, 53074), (128, 53113),

Gene: Compostia_70 Start: 58319, Stop: 58918, Start Num: 52

Candidate Starts for Compostia_70:

(Start: 52 @58319 has 45 MA's), (55, 58328), (58, 58334), (63, 58364), (67, 58388), (83, 58481), (86, 58505), (88, 58514), (97, 58547), (98, 58550), (100, 58574), (103, 58604), (111, 58661),

Gene: Cooper_69 Start: 59149, Stop: 59742, Start Num: 53

Candidate Starts for Cooper_69:

(Start: 53 @59149 has 27 MA's), (66, 59215), (67, 59218), (74, 59266), (81, 59305), (82, 59308), (88, 59344), (89, 59347), (99, 59401), (100, 59404), (115, 59512), (120, 59560), (124, 59575),

Gene: Corofin_71 Start: 57949, Stop: 58548, Start Num: 52

Candidate Starts for Corofin_71:

(Start: 52 @57949 has 45 MA's), (55, 57958), (58, 57964), (63, 57994), (67, 58018), (83, 58111), (86, 58135), (88, 58144), (97, 58177), (98, 58180), (100, 58204), (103, 58234), (111, 58291), (117, 58330), (125, 58375),

Gene: Daisy_70 Start: 57482, Stop: 58081, Start Num: 52

Candidate Starts for Daisy_70:

(Start: 52 @57482 has 45 MA's), (55, 57491), (58, 57497), (63, 57527), (67, 57551), (83, 57644), (86, 57668), (88, 57677), (97, 57710), (98, 57713), (100, 57737), (103, 57767), (111, 57824), (125, 57908),

Gene: Deenasa_71 Start: 58785, Stop: 59384, Start Num: 52

Candidate Starts for Deenasa_71:

(Start: 52 @58785 has 45 MA's), (58, 58800), (63, 58830), (67, 58854), (83, 58947), (86, 58971), (88, 58980), (97, 59013), (98, 59016), (100, 59040), (103, 59070), (111, 59127), (125, 59211),

Gene: Devonte_70 Start: 57561, Stop: 58160, Start Num: 52

Candidate Starts for Devonte_70:

(Start: 52 @57561 has 45 MA's), (55, 57570), (58, 57576), (63, 57606), (67, 57630), (83, 57723), (86, 57747), (88, 57756), (97, 57789), (98, 57792), (100, 57816), (103, 57846), (111, 57903), (117, 57942), (125, 57987),

Gene: Eaglehorse_66 Start: 56088, Stop: 56741, Start Num: 46

Candidate Starts for Eaglehorse_66:

(6, 55734), (9, 55758), (12, 55797), (37, 56028), (Start: 46 @56088 has 31 MA's), (Start: 48 @56094 has 12 MA's), (62, 56142), (65, 56169), (72, 56199), (79, 56259), (85, 56283), (94, 56325), (96, 56331), (97, 56337), (99, 56361), (111, 56451), (129, 56607),

Gene: Epah_65 Start: 58474, Stop: 59061, Start Num: 53

Candidate Starts for Epah_65:

(3, 58069), (8, 58111), (15, 58195), (18, 58213), (21, 58243), (28, 58339), (29, 58348), (Start: 53 @58474 has 27 MA's), (66, 58540), (67, 58543), (73, 58579), (81, 58630), (88, 58669), (89, 58672), (99, 58726), (100, 58729), (115, 58837), (124, 58900), (136, 59002),

Gene: Evaa_63 Start: 50521, Stop: 51108, Start Num: 50

Candidate Starts for Evaa_63:

(Start: 50 @50521 has 1 MA's), (Start: 53 @50527 has 27 MA's), (65, 50578), (69, 50593), (75, 50641), (84, 50689), (88, 50713), (94, 50734), (98, 50749), (99, 50770), (104, 50806), (123, 50932),

Gene: Fanaw_64 Start: 59510, Stop: 60097, Start Num: 53

Candidate Starts for Fanaw_64:

(28, 59375), (29, 59384), (Start: 53 @59510 has 27 MA's), (61, 59540), (66, 59576), (67, 59579), (73, 59615), (74, 59627), (81, 59666), (88, 59705), (89, 59708), (99, 59762), (100, 59765), (114, 59864), (115, 59873), (124, 59936), (136, 60038),

Gene: Faze9_65 Start: 56233, Stop: 56880, Start Num: 48

Candidate Starts for Faze9_65:

(6, 55873), (9, 55897), (12, 55936), (37, 56167), (Start: 46 @56227 has 31 MA's), (Start: 48 @56233 has 12 MA's), (62, 56281), (65, 56308), (72, 56338), (79, 56398), (85, 56422), (94, 56464), (96, 56470), (97, 56476), (99, 56500), (111, 56590), (129, 56746),

Gene: ForDig_68 Start: 58034, Stop: 58732, Start Num: 53

Candidate Starts for ForDig_68:

(Start: 53 @58034 has 27 MA's), (61, 58064), (66, 58100), (67, 58103), (74, 58151), (76, 58163), (79, 58184), (88, 58229), (89, 58232), (99, 58286), (100, 58289), (101, 58313), (111, 58376), (137, 58574),

Gene: Fortunato_68 Start: 59509, Stop: 60096, Start Num: 53

Candidate Starts for Fortunato_68:

(Start: 53 @59509 has 27 MA's), (61, 59539), (66, 59575), (67, 59578), (73, 59614), (81, 59665), (88, 59704), (89, 59707), (99, 59761), (100, 59764), (104, 59797), (106, 59806), (114, 59863), (115, 59872), (124, 59935), (136, 60037),

Gene: Frederick_69 Start: 59456, Stop: 60043, Start Num: 53

Candidate Starts for Frederick_69:

(3, 59051), (7, 59084), (15, 59177), (18, 59195), (21, 59225), (22, 59228), (28, 59321), (29, 59330), (Start: 53 @59456 has 27 MA's), (66, 59522), (67, 59525), (73, 59561), (81, 59612), (88, 59651), (89, 59654), (99, 59708), (100, 59711), (115, 59819), (120, 59867), (124, 59882), (136, 59984),

Gene: FrenchFry_67 Start: 56213, Stop: 56866, Start Num: 46

Candidate Starts for FrenchFry_67:

(6, 55859), (9, 55883), (12, 55922), (37, 56153), (Start: 46 @56213 has 31 MA's), (Start: 48 @56219 has 12 MA's), (62, 56267), (65, 56294), (72, 56324), (79, 56384), (85, 56408), (94, 56450), (96, 56456), (97, 56462), (99, 56486), (111, 56576), (129, 56732),

Gene: Fresco_64 Start: 51329, Stop: 51925, Start Num: 48

Candidate Starts for Fresco_64:

(11, 51029), (14, 51053), (16, 51065), (23, 51140), (40, 51284), (Start: 48 @51329 has 12 MA's), (54, 51344), (58, 51359), (59, 51371), (65, 51407), (75, 51470), (79, 51497), (83, 51509), (84, 51518), (88, 51542), (102, 51629), (114, 51701), (115, 51710), (122, 51758), (125, 51773),

Gene: Gadget_72 Start: 58249, Stop: 58848, Start Num: 52

Candidate Starts for Gadget_72:

(Start: 52 @58249 has 45 MA's), (58, 58264), (63, 58294), (67, 58318), (83, 58411), (86, 58435), (88, 58444), (97, 58477), (98, 58480), (100, 58504), (103, 58534), (111, 58591), (117, 58630),

Gene: Gervas_72 Start: 58343, Stop: 58942, Start Num: 52

Candidate Starts for Gervas_72:

(Start: 52 @58343 has 45 MA's), (55, 58352), (58, 58358), (63, 58388), (67, 58412), (83, 58505), (86, 58529), (88, 58538), (97, 58571), (98, 58574), (100, 58598), (103, 58628), (111, 58685), (117, 58724), (125, 58769),

Gene: GinPorsche_65 Start: 58474, Stop: 59061, Start Num: 53

Candidate Starts for GinPorsche_65:

(3, 58069), (8, 58111), (15, 58195), (18, 58213), (21, 58243), (28, 58339), (29, 58348), (Start: 53 @58474 has 27 MA's), (66, 58540), (67, 58543), (73, 58579), (81, 58630), (88, 58669), (89, 58672), (99, 58726), (100, 58729), (115, 58837), (124, 58900), (136, 59002),

Gene: Glass_67 Start: 56215, Stop: 56868, Start Num: 46

Candidate Starts for Glass_67:

(6, 55861), (9, 55885), (12, 55924), (37, 56155), (Start: 46 @56215 has 31 MA's), (Start: 48 @56221 has 12 MA's), (62, 56269), (65, 56296), (72, 56326), (79, 56386), (85, 56410), (94, 56452), (96, 56458), (97, 56464), (99, 56488), (111, 56578), (129, 56734),

Gene: GlenHope_72 Start: 57909, Stop: 58508, Start Num: 52

Candidate Starts for GlenHope_72:

(Start: 52 @57909 has 45 MA's), (55, 57918), (58, 57924), (63, 57954), (67, 57978), (83, 58071), (86, 58095), (88, 58104), (97, 58137), (98, 58140), (100, 58164), (103, 58194), (111, 58251),

Gene: Glubnar_71 Start: 57815, Stop: 58414, Start Num: 52

Candidate Starts for Glubnar_71:

(Start: 52 @57815 has 45 MA's), (55, 57824), (58, 57830), (63, 57860), (67, 57884), (83, 57977), (86, 58001), (88, 58010), (97, 58043), (98, 58046), (100, 58070), (103, 58100), (111, 58157), (117, 58196),

Gene: Godines_67 Start: 56471, Stop: 57118, Start Num: 46

Candidate Starts for Godines_67:

(6, 56117), (9, 56141), (10, 56159), (12, 56180), (37, 56411), (Start: 46 @56471 has 31 MA's), (Start: 48 @56477 has 12 MA's), (62, 56519), (65, 56546), (72, 56576), (77, 56621), (79, 56636), (85, 56660), (94, 56702), (96, 56708), (97, 56714), (99, 56738), (111, 56828), (129, 56984),

Gene: Halfpint_70 Start: 57660, Stop: 58259, Start Num: 52

Candidate Starts for Halfpint_70:

(Start: 52 @57660 has 45 MA's), (55, 57669), (58, 57675), (63, 57705), (67, 57729), (83, 57822), (86, 57846), (88, 57855), (97, 57888), (98, 57891), (100, 57915), (103, 57945), (111, 58002), (117, 58041), (125, 58086),

Gene: Hally898_65 Start: 58489, Stop: 59076, Start Num: 53

Candidate Starts for Hally898_65:

(3, 58084), (8, 58126), (15, 58210), (18, 58228), (21, 58258), (28, 58354), (29, 58363), (Start: 53 @58489 has 27 MA's), (66, 58555), (67, 58558), (73, 58594), (81, 58645), (88, 58684), (89, 58687), (99, 58741), (100, 58744), (115, 58852), (124, 58915), (136, 59017),

Gene: Hangman_68 Start: 59655, Stop: 60242, Start Num: 53

Candidate Starts for Hangman_68:

(28, 59520), (29, 59529), (32, 59541), (Start: 53 @59655 has 27 MA's), (61, 59685), (66, 59721), (67, 59724), (73, 59760), (81, 59811), (88, 59850), (89, 59853), (99, 59907), (100, 59910), (104, 59943), (106, 59952), (114, 60009), (115, 60018), (124, 60081), (136, 60183),

Gene: HarveySr_70 Start: 57468, Stop: 58064, Start Num: 52

Candidate Starts for HarveySr_70:

(Start: 52 @57468 has 45 MA's), (55, 57477), (63, 57510), (67, 57534), (83, 57627), (86, 57651), (88, 57660), (97, 57693), (98, 57696), (100, 57720), (103, 57750), (111, 57807), (117, 57846), (125, 57891),

Gene: Heath_67 Start: 59282, Stop: 59869, Start Num: 53

Candidate Starts for Heath_67:

(28, 59147), (29, 59156), (32, 59168), (Start: 53 @59282 has 27 MA's), (61, 59312), (66, 59348), (67, 59351), (73, 59387), (81, 59438), (88, 59477), (89, 59480), (99, 59534), (100, 59537), (114, 59636), (115, 59645), (124, 59708), (136, 59810),

Gene: Heathcliff_71 Start: 57876, Stop: 58475, Start Num: 52

Candidate Starts for Heathcliff_71:

(Start: 52 @57876 has 45 MA's), (55, 57885), (58, 57891), (67, 57945), (83, 58038), (86, 58062), (88, 58071), (97, 58104), (98, 58107), (100, 58131), (103, 58161), (111, 58218), (117, 58257),

Gene: Hedgerow_66 Start: 56165, Stop: 56818, Start Num: 46

Candidate Starts for Hedgerow_66:

(9, 55835), (12, 55874), (37, 56105), (Start: 46 @56165 has 31 MA's), (Start: 48 @56171 has 12 MA's), (62, 56219), (65, 56246), (72, 56276), (79, 56336), (85, 56360), (94, 56402), (96, 56408), (97, 56414), (99, 56438), (111, 56528), (129, 56684),

Gene: Holeinone_66 Start: 56073, Stop: 56723, Start Num: 46

Candidate Starts for Holeinone_66:

(6, 55719), (9, 55743), (12, 55782), (37, 56013), (Start: 46 @56073 has 31 MA's), (Start: 48 @56079 has 12 MA's), (62, 56124), (65, 56151), (72, 56181), (79, 56241), (85, 56265), (94, 56307), (96, 56313), (97, 56319), (99, 56343), (111, 56433), (129, 56589),

Gene: Hosp_064 Start: 55830, Stop: 56528, Start Num: 53

Candidate Starts for Hosp_064:

(Start: 53 @55830 has 27 MA's), (61, 55860), (66, 55896), (67, 55899), (76, 55959), (79, 55980), (88, 56025), (89, 56028), (99, 56082), (100, 56085), (101, 56109), (111, 56172), (137, 56370),

Gene: Hydro_68 Start: 59593, Stop: 60180, Start Num: 53

Candidate Starts for Hydro_68:

(28, 59458), (29, 59467), (32, 59479), (Start: 53 @59593 has 27 MA's), (61, 59623), (66, 59659), (67, 59662), (73, 59698), (81, 59749), (88, 59788), (89, 59791), (99, 59845), (100, 59848), (104, 59881), (106, 59890), (114, 59947), (115, 59956), (124, 60019), (136, 60121),

Gene: ItsyBitsy1_65 Start: 56303, Stop: 56956, Start Num: 46

Candidate Starts for ItsyBitsy1_65:

(37, 56243), (Start: 46 @56303 has 31 MA's), (Start: 48 @56309 has 12 MA's), (62, 56357), (65, 56384), (72, 56414), (79, 56474), (85, 56498), (94, 56540), (96, 56546), (97, 56552), (99, 56576), (111, 56666), (129, 56822),

Gene: JAMaL_67 Start: 59483, Stop: 60070, Start Num: 53

Candidate Starts for JAMaL_67:

(3, 59078), (7, 59111), (15, 59204), (18, 59222), (21, 59252), (28, 59348), (29, 59357), (Start: 53 @59483 has 27 MA's), (66, 59549), (67, 59552), (73, 59588), (81, 59639), (88, 59678), (89, 59681), (99, 59735), (100, 59738), (115, 59846), (120, 59894), (124, 59909), (136, 60011),

Gene: Jackstina_67 Start: 57801, Stop: 58400, Start Num: 52

Candidate Starts for Jackstina_67:

(Start: 52 @57801 has 45 MA's), (58, 57816), (63, 57846), (67, 57870), (83, 57963), (86, 57987), (88, 57996), (97, 58029), (98, 58032), (100, 58056), (103, 58086), (111, 58143),

Gene: JaguarMi_68 Start: 60746, Stop: 61336, Start Num: 53

Candidate Starts for JaguarMi_68:

(28, 60611), (29, 60620), (Start: 53 @60746 has 27 MA's), (61, 60776), (66, 60812), (67, 60815), (73, 60851), (74, 60863), (81, 60902), (88, 60941), (89, 60944), (99, 60998), (100, 61001), (114, 61100), (115, 61109), (124, 61172), (136, 61274),

Gene: Jolie1_066 Start: 57958, Stop: 58656, Start Num: 53

Candidate Starts for Jolie1_066:

(Start: 53 @57958 has 27 MA's), (61, 57988), (66, 58024), (67, 58027), (76, 58087), (79, 58108), (88, 58153), (89, 58156), (99, 58210), (100, 58213), (101, 58237), (111, 58300), (137, 58498),

Gene: Kaleb_67 Start: 56220, Stop: 56873, Start Num: 46

Candidate Starts for Kaleb_67:

(6, 55866), (9, 55890), (12, 55929), (37, 56160), (Start: 46 @56220 has 31 MA's), (Start: 48 @56226 has 12 MA's), (62, 56274), (65, 56301), (72, 56331), (79, 56391), (85, 56415), (94, 56457), (96, 56463), (97, 56469), (99, 56493), (111, 56583), (129, 56739), (140, 56808),

Gene: Kamiyu_71 Start: 57878, Stop: 58477, Start Num: 52

Candidate Starts for Kamiyu_71:

(Start: 52 @57878 has 45 MA's), (55, 57887), (58, 57893), (63, 57923), (67, 57947), (83, 58040), (86, 58064), (88, 58073), (97, 58106), (98, 58109), (100, 58133), (103, 58163), (111, 58220), (117, 58259),

Gene: KayaCho_66 Start: 57943, Stop: 58623, Start Num: 53

Candidate Starts for KayaCho_66:

(Start: 53 @57943 has 27 MA's), (61, 57973), (66, 58009), (67, 58012), (75, 58066), (79, 58093), (89, 58141), (99, 58195), (100, 58198), (101, 58222), (102, 58225), (111, 58285), (131, 58435), (137, 58468),

Gene: Kheth_66 Start: 56132, Stop: 56785, Start Num: 46

Candidate Starts for Kheth_66:

(6, 55778), (9, 55802), (12, 55841), (37, 56072), (Start: 46 @56132 has 31 MA's), (Start: 48 @56138 has 12 MA's), (62, 56186), (65, 56213), (72, 56243), (79, 56303), (85, 56327), (94, 56369), (96, 56375),

(97, 56381), (99, 56405), (111, 56495), (129, 56651),

Gene: Kolhan_67 Start: 56109, Stop: 56762, Start Num: 46

Candidate Starts for Kolhan_67:

(37, 56049), (Start: 46 @56109 has 31 MA's), (Start: 48 @56115 has 12 MA's), (62, 56163), (65, 56190), (72, 56220), (79, 56280), (85, 56304), (94, 56346), (96, 56352), (97, 56358), (99, 56382), (111, 56472), (129, 56628),

Gene: Kronus_71 Start: 58974, Stop: 59573, Start Num: 52

Candidate Starts for Kronus_71:

(Start: 52 @58974 has 45 MA's), (55, 58983), (58, 58989), (63, 59019), (67, 59043), (83, 59136), (86, 59160), (88, 59169), (97, 59202), (98, 59205), (100, 59229), (103, 59259), (111, 59316),

Gene: Lambano_65 Start: 58489, Stop: 59076, Start Num: 53

Candidate Starts for Lambano_65:

(3, 58084), (8, 58126), (15, 58210), (18, 58228), (21, 58258), (28, 58354), (29, 58363), (Start: 53 @58489 has 27 MA's), (66, 58555), (67, 58558), (73, 58594), (81, 58645), (88, 58684), (89, 58687), (99, 58741), (100, 58744), (115, 58852), (124, 58915), (136, 59017),

Gene: Lars_67 Start: 56193, Stop: 56846, Start Num: 46

Candidate Starts for Lars_67:

(6, 55839), (9, 55863), (12, 55902), (37, 56133), (Start: 46 @56193 has 31 MA's), (Start: 48 @56199 has 12 MA's), (62, 56247), (65, 56274), (72, 56304), (79, 56364), (85, 56388), (94, 56430), (96, 56436), (97, 56442), (99, 56466), (111, 56556), (129, 56712),

Gene: Laurie_66 Start: 55873, Stop: 56523, Start Num: 46

Candidate Starts for Laurie_66:

(37, 55813), (Start: 46 @55873 has 31 MA's), (Start: 48 @55879 has 12 MA's), (62, 55924), (65, 55951), (72, 55981), (77, 56026), (79, 56041), (85, 56065), (94, 56107), (96, 56113), (97, 56119), (99, 56143), (111, 56233), (129, 56389),

Gene: Lephleur_66 Start: 56058, Stop: 56708, Start Num: 46

Candidate Starts for Lephleur_66:

(6, 55704), (9, 55728), (12, 55767), (37, 55998), (Start: 46 @56058 has 31 MA's), (Start: 48 @56064 has 12 MA's), (62, 56109), (65, 56136), (72, 56166), (79, 56226), (85, 56250), (94, 56292), (96, 56298), (97, 56304), (99, 56328), (111, 56418), (129, 56574),

Gene: LestyG_69 Start: 57404, Stop: 58003, Start Num: 52

Candidate Starts for LestyG_69:

(Start: 52 @57404 has 45 MA's), (58, 57419), (63, 57449), (67, 57473), (83, 57566), (86, 57590), (88, 57599), (97, 57632), (98, 57635), (100, 57659), (103, 57689), (111, 57746), (117, 57785), (125, 57830),

Gene: Ligma_64 Start: 51329, Stop: 51919, Start Num: 48

Candidate Starts for Ligma_64:

(Start: 48 @51329 has 12 MA's), (54, 51338), (65, 51401), (75, 51464), (79, 51491), (83, 51503), (84, 51512), (88, 51536), (102, 51623), (114, 51695), (115, 51704), (122, 51752), (125, 51767),

Gene: LilSmirk_66 Start: 56091, Stop: 56744, Start Num: 46

Candidate Starts for LilSmirk_66:

(6, 55737), (9, 55761), (12, 55800), (37, 56031), (Start: 46 @56091 has 31 MA's), (Start: 48 @56097 has 12 MA's), (62, 56145), (65, 56172), (72, 56202), (79, 56262), (85, 56286), (94, 56328), (96, 56334), (97, 56340), (99, 56364), (111, 56454), (129, 56610),

Gene: LittleMunchkin_65 Start: 54116, Stop: 54709, Start Num: 49

Candidate Starts for LittleMunchkin_65:

(Start: 49 @54116 has 1 MA's), (65, 54185), (75, 54248), (79, 54275), (81, 54281), (84, 54296), (88, 54320), (94, 54341), (102, 54407), (111, 54467), (113, 54473), (114, 54479), (115, 54488), (122, 54536), (125, 54551),

Gene: LizLemon_66 Start: 56220, Stop: 56873, Start Num: 46

Candidate Starts for LizLemon_66:

(6, 55866), (9, 55890), (12, 55929), (37, 56160), (Start: 46 @56220 has 31 MA's), (Start: 48 @56226 has 12 MA's), (62, 56274), (65, 56301), (72, 56331), (79, 56391), (85, 56415), (94, 56457), (96, 56463), (97, 56469), (99, 56493), (111, 56583), (129, 56739),

Gene: Lolalove_69 Start: 59664, Stop: 60251, Start Num: 53

Candidate Starts for Lolalove_69:

(28, 59529), (29, 59538), (Start: 53 @59664 has 27 MA's), (61, 59694), (66, 59730), (67, 59733), (73, 59769), (81, 59820), (88, 59859), (89, 59862), (99, 59916), (100, 59919), (104, 59952), (106, 59961), (114, 60018), (115, 60027), (124, 60090), (136, 60192),

Gene: Magpie_65 Start: 59349, Stop: 59936, Start Num: 53

Candidate Starts for Magpie_65:

(Start: 53 @59349 has 27 MA's), (66, 59415), (67, 59418), (73, 59454), (81, 59505), (88, 59544), (89, 59547), (99, 59601), (100, 59604), (106, 59646), (115, 59712), (124, 59775), (136, 59877),

Gene: MakoManhole_62 Start: 51487, Stop: 52053, Start Num: 51

Candidate Starts for MakoManhole_62:

(4, 51094), (33, 51376), (34, 51385), (Start: 51 @51487 has 6 MA's), (65, 51556), (76, 51625), (79, 51646), (81, 51652), (84, 51667), (88, 51691), (94, 51712), (102, 51778), (103, 51781), (105, 51790), (111, 51838), (113, 51844), (115, 51859), (125, 51922),

Gene: Mariokart_60 Start: 50195, Stop: 50812, Start Num: 48

Candidate Starts for Mariokart_60:

(2, 49796), (14, 49919), (16, 49931), (23, 50006), (40, 50150), (Start: 48 @50195 has 12 MA's), (54, 50210), (58, 50225), (59, 50237), (65, 50273), (76, 50342), (79, 50363), (84, 50384), (88, 50408), (94, 50429), (102, 50495), (114, 50567), (115, 50576), (122, 50624), (125, 50639),

Gene: Marley1013_72 Start: 58826, Stop: 59425, Start Num: 52

Candidate Starts for Marley1013_72:

(Start: 52 @58826 has 45 MA's), (55, 58835), (58, 58841), (63, 58871), (67, 58895), (83, 58988), (86, 59012), (88, 59021), (97, 59054), (98, 59057), (100, 59081), (103, 59111), (111, 59168),

Gene: Marlia_72 Start: 58347, Stop: 58946, Start Num: 52

Candidate Starts for Marlia_72:

(Start: 52 @58347 has 45 MA's), (55, 58356), (58, 58362), (63, 58392), (67, 58416), (83, 58509), (86, 58533), (88, 58542), (97, 58575), (98, 58578), (100, 58602), (103, 58632), (111, 58689), (117, 58728), (125, 58773),

Gene: MasterPo_67 Start: 56090, Stop: 56740, Start Num: 46

Candidate Starts for MasterPo_67:

(6, 55736), (9, 55760), (12, 55799), (37, 56030), (Start: 46 @56090 has 31 MA's), (Start: 48 @56096 has 12 MA's), (62, 56141), (65, 56168), (72, 56198), (79, 56258), (85, 56282), (94, 56324), (96, 56330), (97, 56336), (99, 56360), (111, 56450), (129, 56606),

Gene: Mithril_67 Start: 59663, Stop: 60250, Start Num: 53

Candidate Starts for Mithril_67:

(Start: 53 @59663 has 27 MA's), (61, 59693), (66, 59729), (67, 59732), (73, 59768), (81, 59819), (88, 59858), (89, 59861), (99, 59915), (100, 59918), (104, 59951), (106, 59960), (114, 60017), (115, 60026), (124, 60089), (136, 60191),

Gene: MmasiCarm_72 Start: 58329, Stop: 58928, Start Num: 52

Candidate Starts for MmasiCarm_72:

(Start: 52 @58329 has 45 MA's), (58, 58344), (67, 58398), (83, 58491), (86, 58515), (88, 58524), (97, 58557), (98, 58560), (100, 58584), (103, 58614), (111, 58671),

Gene: Mortcellus_71 Start: 58991, Stop: 59590, Start Num: 52

Candidate Starts for Mortcellus_71:

(Start: 52 @58991 has 45 MA's), (58, 59006), (63, 59036), (67, 59060), (83, 59153), (86, 59177), (88, 59186), (97, 59219), (98, 59222), (100, 59246), (103, 59276), (111, 59333),

Gene: Morty007_70 Start: 58826, Stop: 59425, Start Num: 52

Candidate Starts for Morty007_70:

(Start: 52 @58826 has 45 MA's), (55, 58835), (58, 58841), (63, 58871), (67, 58895), (83, 58988), (86, 59012), (88, 59021), (97, 59054), (98, 59057), (100, 59081), (103, 59111), (111, 59168),

Gene: MossRose_65 Start: 52447, Stop: 53013, Start Num: 51

Candidate Starts for MossRose_65:

(4, 52054), (33, 52336), (34, 52345), (Start: 51 @52447 has 6 MA's), (65, 52516), (76, 52585), (79, 52606), (81, 52612), (84, 52627), (88, 52651), (94, 52672), (102, 52738), (103, 52741), (105, 52750), (111, 52798), (113, 52804), (115, 52819), (125, 52882),

Gene: Mudslide_67 Start: 59684, Stop: 60271, Start Num: 53

Candidate Starts for Mudslide_67:

(28, 59549), (29, 59558), (Start: 53 @59684 has 27 MA's), (66, 59750), (67, 59753), (73, 59789), (81, 59840), (88, 59879), (89, 59882), (99, 59936), (100, 59939), (106, 59981), (114, 60038), (115, 60047), (124, 60110),

Gene: Mulan_69 Start: 57533, Stop: 58228, Start Num: 43

Candidate Starts for Mulan_69:

(Start: 43 @57533 has 3 MA's), (66, 57623), (69, 57632), (70, 57638), (74, 57674), (75, 57680), (78, 57695), (87, 57749), (88, 57752), (94, 57773), (98, 57788), (99, 57809), (111, 57899), (118, 57947),

Gene: Mysterious_71 Start: 59187, Stop: 59828, Start Num: 53

Candidate Starts for Mysterious_71:

(Start: 53 @59187 has 27 MA's), (63, 59232), (75, 59310), (79, 59337), (90, 59391), (91, 59397), (97, 59415), (99, 59439), (100, 59442), (102, 59469), (106, 59484), (110, 59523), (112, 59532), (115, 59550), (117, 59568), (127, 59658),

Gene: NHagos_62 Start: 50884, Stop: 51486, Start Num: 44

Candidate Starts for NHagos_62:

(13, 50605), (23, 50707), (Start: 44 @50884 has 2 MA's), (60, 50944), (63, 50962), (69, 50992), (76, 51046), (79, 51067), (83, 51079), (84, 51088), (88, 51112), (94, 51133), (95, 51136), (103, 51202), (105, 51211), (115, 51280), (119, 51310), (124, 51334), (133, 51421),

Gene: Nanao_66 Start: 58479, Stop: 59066, Start Num: 53

Candidate Starts for Nanao_66:

(3, 58074), (8, 58116), (15, 58200), (18, 58218), (21, 58248), (28, 58344), (29, 58353), (Start: 53 @58479 has 27 MA's), (66, 58545), (67, 58548), (73, 58584), (81, 58635), (88, 58674), (89, 58677), (99, 58731), (100, 58734), (115, 58842), (124, 58905), (136, 59007),

Gene: Nehemiah_69 Start: 59025, Stop: 59666, Start Num: 53

Candidate Starts for Nehemiah_69:

(Start: 53 @59025 has 27 MA's), (63, 59070), (75, 59148), (78, 59163), (79, 59175), (90, 59229), (91, 59235), (97, 59253), (99, 59277), (100, 59280), (102, 59307), (106, 59322), (110, 59361), (112, 59370), (115, 59388), (117, 59406), (127, 59496), (138, 59562),

Gene: Neos5_71 Start: 58288, Stop: 58887, Start Num: 52

Candidate Starts for Neos5_71:

(Start: 52 @58288 has 45 MA's), (55, 58297), (58, 58303), (67, 58357), (83, 58450), (86, 58474), (88, 58483), (97, 58516), (98, 58519), (100, 58543), (103, 58573), (111, 58630),

Gene: Nigel_65 Start: 58299, Stop: 58883, Start Num: 53

Candidate Starts for Nigel_65:

(Start: 53 @58299 has 27 MA's), (55, 58305), (61, 58329), (66, 58365), (67, 58368), (74, 58416), (81, 58455), (88, 58494), (89, 58497), (99, 58551), (100, 58554), (115, 58662), (124, 58725),

Gene: Nozo_71 Start: 58685, Stop: 59284, Start Num: 52

Candidate Starts for Nozo_71:

(Start: 52 @58685 has 45 MA's), (58, 58700), (63, 58730), (67, 58754), (83, 58847), (86, 58871), (88, 58880), (97, 58913), (98, 58916), (100, 58940), (103, 58970), (111, 59027), (125, 59111),

Gene: Obutu_73 Start: 58508, Stop: 59107, Start Num: 52

Candidate Starts for Obutu_73:

(Start: 52 @58508 has 45 MA's), (58, 58523), (63, 58553), (67, 58577), (83, 58670), (86, 58694), (88, 58703), (97, 58736), (98, 58739), (100, 58763), (103, 58793), (111, 58850), (117, 58889),

Gene: Olivio_71 Start: 58141, Stop: 58740, Start Num: 52

Candidate Starts for Olivio_71:

(Start: 52 @58141 has 45 MA's), (55, 58150), (58, 58156), (67, 58210), (83, 58303), (86, 58327), (88, 58336), (97, 58369), (98, 58372), (100, 58396), (103, 58426), (111, 58483), (117, 58522),

Gene: Opia_67 Start: 56110, Stop: 56766, Start Num: 46

Candidate Starts for Opia_67:

(6, 55756), (9, 55780), (12, 55819), (37, 56050), (Start: 46 @56110 has 31 MA's), (Start: 48 @56116 has 12 MA's), (62, 56167), (65, 56194), (72, 56224), (79, 56284), (85, 56308), (94, 56350), (96, 56356), (97, 56362), (99, 56386), (111, 56476), (129, 56632),

Gene: OrangeOswald_71 Start: 57926, Stop: 58525, Start Num: 52

Candidate Starts for OrangeOswald_71:

(Start: 52 @57926 has 45 MA's), (58, 57941), (63, 57971), (67, 57995), (83, 58088), (86, 58112), (88, 58121), (97, 58154), (98, 58157), (100, 58181), (103, 58211), (111, 58268), (125, 58352),

Gene: Phaedrus_66 Start: 57351, Stop: 57950, Start Num: 52

Candidate Starts for Phaedrus_66:

(Start: 52 @57351 has 45 MA's), (55, 57360), (58, 57366), (63, 57396), (67, 57420), (83, 57513), (86, 57537), (88, 57546), (97, 57579), (98, 57582), (100, 57606), (103, 57636), (111, 57693), (117, 57732),

Gene: Phantasmagoria_65 Start: 56102, Stop: 56755, Start Num: 46

Candidate Starts for Phantasmagoria_65:

(6, 55748), (9, 55772), (12, 55811), (37, 56042), (Start: 46 @56102 has 31 MA's), (Start: 48 @56108 has 12 MA's), (62, 56156), (65, 56183), (72, 56213), (79, 56273), (85, 56297), (94, 56339), (96, 56345), (97, 56351), (99, 56375), (111, 56465), (129, 56621),

Gene: Phayeta_74 Start: 58412, Stop: 59011, Start Num: 52

Candidate Starts for Phayeta_74:

(Start: 52 @58412 has 45 MA's), (58, 58427), (63, 58457), (67, 58481), (83, 58574), (86, 58598), (88, 58607), (97, 58640), (98, 58643), (100, 58667), (103, 58697), (111, 58754),

Gene: Philly_70 Start: 57738, Stop: 58337, Start Num: 52

Candidate Starts for Philly_70:

(Start: 52 @57738 has 45 MA's), (55, 57747), (58, 57753), (63, 57783), (67, 57807), (83, 57900), (86, 57924), (88, 57933), (97, 57966), (98, 57969), (100, 57993), (103, 58023), (111, 58080), (117, 58119),

Gene: Phlyer_71 Start: 58634, Stop: 59233, Start Num: 52

Candidate Starts for Phlyer_71:

(Start: 52 @58634 has 45 MA's), (55, 58643), (58, 58649), (63, 58679), (67, 58703), (83, 58796), (86, 58820), (88, 58829), (97, 58862), (98, 58865), (100, 58889), (103, 58919), (111, 58976),

Gene: Pipefish_74 Start: 59045, Stop: 59644, Start Num: 52

Candidate Starts for Pipefish_74:

(Start: 52 @59045 has 45 MA's), (58, 59060), (63, 59090), (67, 59114), (83, 59207), (86, 59231), (88, 59240), (97, 59273), (98, 59276), (100, 59300), (103, 59330), (111, 59387), (117, 59426), (125, 59471),

Gene: Poster_65 Start: 58480, Stop: 59067, Start Num: 53

Candidate Starts for Poster_65:

(3, 58075), (8, 58117), (15, 58201), (18, 58219), (21, 58249), (28, 58345), (29, 58354), (Start: 53 @58480 has 27 MA's), (66, 58546), (67, 58549), (73, 58585), (81, 58636), (88, 58675), (89, 58678), (99, 58732), (100, 58735), (115, 58843), (124, 58906), (136, 59008),

Gene: Prince_66 Start: 59594, Stop: 60181, Start Num: 53

Candidate Starts for Prince_66:

(28, 59459), (29, 59468), (Start: 53 @59594 has 27 MA's), (61, 59624), (66, 59660), (67, 59663), (73, 59699), (81, 59750), (88, 59789), (89, 59792), (99, 59846), (100, 59849), (104, 59882), (106, 59891), (115, 59957), (124, 60020),

Gene: PrinceCharming_67 Start: 56142, Stop: 56795, Start Num: 46

Candidate Starts for PrinceCharming_67:

(6, 55791), (9, 55815), (12, 55854), (37, 56082), (Start: 46 @56142 has 31 MA's), (Start: 48 @56148 has 12 MA's), (62, 56196), (65, 56223), (72, 56253), (79, 56313), (85, 56337), (94, 56379), (96, 56385), (97, 56391), (99, 56415), (111, 56505), (129, 56661),

Gene: QueenPie_62 Start: 58582, Stop: 59169, Start Num: 53

Candidate Starts for QueenPie_62:

(Start: 53 @58582 has 27 MA's), (61, 58612), (66, 58648), (67, 58651), (73, 58687), (81, 58738), (82, 58741), (88, 58777), (89, 58780), (99, 58834), (100, 58837), (115, 58945), (120, 58993), (124, 59008), (136, 59110),

Gene: Qyrzula_60 Start: 56221, Stop: 56880, Start Num: 46

Candidate Starts for Qyrzula_60:

(6, 55867), (9, 55891), (12, 55930), (37, 56161), (Start: 46 @56221 has 31 MA's), (Start: 48 @56227 has 12 MA's), (62, 56281), (65, 56308), (72, 56338), (79, 56398), (85, 56422), (94, 56464), (96, 56470),

(97, 56476), (99, 56500), (111, 56590), (129, 56746),

Gene: RagingRooster_70 Start: 57566, Stop: 58165, Start Num: 52

Candidate Starts for RagingRooster_70:

(Start: 52 @57566 has 45 MA's), (55, 57575), (58, 57581), (63, 57611), (67, 57635), (83, 57728), (86, 57752), (88, 57761), (97, 57794), (98, 57797), (100, 57821), (103, 57851), (111, 57908),

Gene: RawrgerThat_68 Start: 59487, Stop: 60074, Start Num: 53

Candidate Starts for RawrgerThat_68:

(Start: 53 @59487 has 27 MA's), (61, 59517), (66, 59553), (67, 59556), (73, 59592), (81, 59643), (88, 59682), (89, 59685), (99, 59739), (100, 59742), (106, 59784), (115, 59850), (124, 59913), (136, 60015),

Gene: Rhinoforte_66 Start: 56143, Stop: 56793, Start Num: 46

Candidate Starts for Rhinoforte_66:

(6, 55789), (9, 55813), (12, 55852), (37, 56083), (Start: 46 @56143 has 31 MA's), (Start: 48 @56149 has 12 MA's), (62, 56194), (65, 56221), (72, 56251), (79, 56311), (85, 56335), (94, 56377), (96, 56383), (97, 56389), (99, 56413), (111, 56503), (129, 56659),

Gene: Rita1961_72 Start: 58284, Stop: 58883, Start Num: 52

Candidate Starts for Rita1961_72:

(Start: 52 @58284 has 45 MA's), (58, 58299), (67, 58353), (83, 58446), (86, 58470), (88, 58479), (97, 58512), (98, 58515), (100, 58539), (103, 58569), (111, 58626),

Gene: RomaT_71 Start: 58485, Stop: 59084, Start Num: 52

Candidate Starts for RomaT_71:

(Start: 52 @58485 has 45 MA's), (55, 58494), (58, 58500), (63, 58530), (67, 58554), (83, 58647), (86, 58671), (88, 58680), (97, 58713), (98, 58716), (100, 58740), (103, 58770), (111, 58827), (117, 58866), (125, 58911),

Gene: Rosebush_65 Start: 56206, Stop: 56859, Start Num: 46

Candidate Starts for Rosebush_65:

(6, 55852), (9, 55876), (12, 55915), (37, 56146), (Start: 46 @56206 has 31 MA's), (Start: 48 @56212 has 12 MA's), (62, 56260), (65, 56287), (72, 56317), (79, 56377), (85, 56401), (94, 56443), (96, 56449), (97, 56455), (99, 56479), (111, 56569), (129, 56725),

Gene: Sabella_66 Start: 56042, Stop: 56695, Start Num: 46

Candidate Starts for Sabella_66:

(37, 55982), (Start: 46 @56042 has 31 MA's), (Start: 48 @56048 has 12 MA's), (62, 56096), (65, 56123), (72, 56153), (79, 56213), (85, 56237), (94, 56279), (96, 56285), (97, 56291), (99, 56315), (111, 56405), (129, 56561),

Gene: Saguaro_66 Start: 58049, Stop: 58765, Start Num: 53

Candidate Starts for Saguaro_66:

(Start: 53 @58049 has 27 MA's), (63, 58094), (66, 58115), (67, 58118), (75, 58172), (76, 58178), (78, 58187), (80, 58202), (88, 58244), (99, 58301), (100, 58304), (111, 58391), (124, 58475), (133, 58559),

Gene: Shatter_64 Start: 51329, Stop: 51919, Start Num: 48

Candidate Starts for Shatter_64:

(Start: 48 @51329 has 12 MA's), (54, 51338), (65, 51401), (75, 51464), (79, 51491), (83, 51503), (84, 51512), (88, 51536), (102, 51623), (114, 51695), (115, 51704), (122, 51752), (125, 51767),

Gene: Shenandoah_70 Start: 57543, Stop: 58142, Start Num: 52

Candidate Starts for Shenandoah_70:

(Start: 52 @57543 has 45 MA's), (55, 57552), (58, 57558), (63, 57588), (67, 57612), (83, 57705), (86, 57729), (88, 57738), (97, 57771), (98, 57774), (100, 57798), (103, 57828), (111, 57885),

Gene: Sisko_62 Start: 51559, Stop: 52155, Start Num: 48

Candidate Starts for Sisko_62:

(Start: 48 @51559 has 12 MA's), (65, 51637), (74, 51694), (76, 51706), (79, 51727), (88, 51772), (94, 51793), (102, 51859), (115, 51940), (122, 51988), (125, 52003),

Gene: SlippinJimmy_74 Start: 59309, Stop: 59908, Start Num: 52

Candidate Starts for SlippinJimmy_74:

(Start: 52 @59309 has 45 MA's), (55, 59318), (58, 59324), (63, 59354), (67, 59378), (83, 59471), (86, 59495), (88, 59504), (97, 59537), (98, 59540), (100, 59564), (103, 59594), (111, 59651), (117, 59690), (125, 59735),

Gene: Sour_64 Start: 53787, Stop: 54392, Start Num: 42

Candidate Starts for Sour_64:

(Start: 42 @53787 has 1 MA's), (65, 53883), (74, 53940), (76, 53952), (88, 54018), (94, 54039), (102, 54105), (111, 54165), (113, 54171), (114, 54177), (115, 54186), (122, 54234), (125, 54249),

Gene: StAugustine_92 Start: 69363, Stop: 69944, Start Num: 53

Candidate Starts for StAugustine_92:

(Start: 53 @69363 has 27 MA's), (65, 69432), (69, 69447), (83, 69534), (84, 69543), (86, 69558), (88, 69567), (100, 69627), (111, 69726), (139, 69939),

Gene: Stinger_67 Start: 58422, Stop: 59009, Start Num: 53

Candidate Starts for Stinger_67:

(3, 58029), (15, 58155), (19, 58185), (29, 58296), (Start: 53 @58422 has 27 MA's), (55, 58428), (61, 58452), (66, 58488), (67, 58491), (74, 58539), (81, 58578), (82, 58581), (88, 58617), (89, 58620), (99, 58674), (100, 58677), (115, 58785), (124, 58848), (136, 58950),

Gene: SwainyDoc_72 Start: 58307, Stop: 58906, Start Num: 52

Candidate Starts for SwainyDoc_72:

(Start: 52 @58307 has 45 MA's), (55, 58316), (58, 58322), (63, 58352), (67, 58376), (83, 58469), (86, 58493), (88, 58502), (97, 58535), (98, 58538), (100, 58562), (103, 58592), (111, 58649), (117, 58688), (125, 58733),

Gene: SynergyX_71 Start: 57923, Stop: 58522, Start Num: 52

Candidate Starts for SynergyX_71:

(Start: 52 @57923 has 45 MA's), (55, 57932), (58, 57938), (63, 57968), (67, 57992), (83, 58085), (86, 58109), (88, 58118), (97, 58151), (98, 58154), (100, 58178), (103, 58208), (111, 58265), (125, 58349),

Gene: TA17A_68 Start: 56048, Stop: 56698, Start Num: 46

Candidate Starts for TA17A_68:

(37, 55988), (Start: 46 @56048 has 31 MA's), (Start: 48 @56054 has 12 MA's), (62, 56099), (65, 56126), (72, 56156), (77, 56201), (79, 56216), (85, 56240), (94, 56282), (96, 56288), (97, 56294), (99, 56318), (111, 56408), (129, 56564),

Gene: TPA2_72 Start: 57781, Stop: 58404, Start Num: 38

Candidate Starts for TPA2_72:

(20, 57622), (24, 57667), (30, 57736), (38, 57781), (57, 57871), (64, 57916), (68, 57940), (71, 57952), (79, 58021), (82, 58030), (83, 58033), (92, 58081), (93, 58084), (102, 58153), (103, 58156), (104, 58159), (111, 58213), (116, 58246), (117, 58255), (119, 58267), (130, 58366), (132, 58375),

Gene: Tinciduntolum_67 Start: 56209, Stop: 56862, Start Num: 46

Candidate Starts for Tinciduntolum_67:

(6, 55855), (9, 55879), (12, 55918), (37, 56149), (Start: 46 @56209 has 31 MA's), (Start: 48 @56215 has 12 MA's), (62, 56263), (65, 56290), (72, 56320), (79, 56380), (85, 56404), (94, 56446), (96, 56452), (97, 56458), (99, 56482), (111, 56572), (129, 56728),

Gene: TinyTerror_72 Start: 58345, Stop: 58944, Start Num: 52

Candidate Starts for TinyTerror_72:

(Start: 52 @58345 has 45 MA's), (58, 58360), (67, 58414), (83, 58507), (86, 58531), (88, 58540), (97, 58573), (98, 58576), (100, 58600), (103, 58630), (111, 58687),

Gene: Tres_66 Start: 56063, Stop: 56716, Start Num: 46

Candidate Starts for Tres_66:

(6, 55709), (9, 55733), (12, 55772), (37, 56003), (Start: 46 @56063 has 31 MA's), (Start: 48 @56069 has 12 MA's), (62, 56117), (65, 56144), (72, 56174), (79, 56234), (85, 56258), (94, 56300), (96, 56306), (97, 56312), (99, 56336), (111, 56426), (129, 56582),

Gene: Tydolla_67 Start: 57917, Stop: 58513, Start Num: 52

Candidate Starts for Tydolla_67:

(Start: 52 @57917 has 45 MA's), (55, 57926), (63, 57959), (67, 57983), (83, 58076), (86, 58100), (88, 58109), (97, 58142), (98, 58145), (100, 58169), (103, 58199), (111, 58256), (117, 58295), (125, 58340),

Gene: Vic9_00065 Start: 56894, Stop: 57553, Start Num: 46

Candidate Starts for Vic9_00065:

(37, 56834), (Start: 46 @56894 has 31 MA's), (Start: 48 @56900 has 12 MA's), (62, 56954), (65, 56981), (72, 57011), (77, 57056), (79, 57071), (85, 57095), (94, 57137), (96, 57143), (97, 57149), (99, 57173), (111, 57263), (129, 57419),

Gene: Vincenzo_70 Start: 60825, Stop: 61445, Start Num: 43

Candidate Starts for Vincenzo_70:

(5, 60477), (15, 60576), (17, 60582), (20, 60621), (Start: 43 @60825 has 3 MA's), (67, 60921), (73, 60957), (74, 60969), (76, 60981), (88, 61047), (89, 61050), (99, 61104), (100, 61107), (103, 61137), (115, 61215), (124, 61278), (136, 61380),

Gene: VioletZ_69 Start: 59597, Stop: 60184, Start Num: 53

Candidate Starts for VioletZ_69:

(Start: 53 @59597 has 27 MA's), (61, 59627), (66, 59663), (67, 59666), (73, 59702), (81, 59753), (88, 59792), (89, 59795), (99, 59849), (100, 59852), (104, 59885), (106, 59894), (108, 59915), (115, 59960), (124, 60023),

Gene: Waleliano_67 Start: 59486, Stop: 60073, Start Num: 53

Candidate Starts for Waleliano_67:

(28, 59351), (29, 59360), (Start: 53 @59486 has 27 MA's), (61, 59516), (66, 59552), (67, 59555), (73, 59591), (81, 59642), (88, 59681), (89, 59684), (99, 59738), (100, 59741), (104, 59774), (106, 59783), (114, 59840), (115, 59849), (124, 59912), (136, 60014),

Gene: West99_66 Start: 56236, Stop: 56889, Start Num: 46

Candidate Starts for West99_66:

(6, 55882), (9, 55906), (12, 55945), (37, 56176), (Start: 46 @56236 has 31 MA's), (Start: 48 @56242 has 12 MA's), (62, 56290), (65, 56317), (72, 56347), (79, 56407), (85, 56431), (94, 56473), (96, 56479), (97, 56485), (99, 56509), (111, 56599), (129, 56755),

Gene: Wooper_66 Start: 52518, Stop: 53084, Start Num: 51

Candidate Starts for Wooper_66:

(Start: 51 @52518 has 6 MA's), (65, 52587), (76, 52656), (79, 52677), (81, 52683), (84, 52698), (88, 52722), (94, 52743), (102, 52809), (103, 52812), (105, 52821), (111, 52869), (113, 52875), (115, 52890), (125, 52953),

Gene: Xincheng_67 Start: 60697, Stop: 61287, Start Num: 53

Candidate Starts for Xincheng_67:

(28, 60562), (29, 60571), (Start: 53 @60697 has 27 MA's), (61, 60727), (66, 60763), (67, 60766), (73, 60802), (74, 60814), (81, 60853), (88, 60892), (89, 60895), (99, 60949), (100, 60952), (114, 61051), (115, 61060), (124, 61123), (136, 61225),

Gene: Yago84_61 Start: 51044, Stop: 51640, Start Num: 48

Candidate Starts for Yago84_61:

(Start: 48 @51044 has 12 MA's), (65, 51122), (74, 51179), (76, 51191), (79, 51212), (88, 51257), (94, 51278), (100, 51317), (102, 51344), (113, 51410), (115, 51425), (122, 51473), (125, 51488),

Gene: Yahalom_69 Start: 57728, Stop: 58327, Start Num: 52

Candidate Starts for Yahalom_69:

(Start: 52 @57728 has 45 MA's), (55, 57737), (58, 57743), (63, 57773), (67, 57797), (83, 57890), (86, 57914), (88, 57923), (97, 57956), (98, 57959), (100, 57983), (103, 58013), (111, 58070), (117, 58109), (125, 58154),

Gene: Yeshua_66 Start: 52495, Stop: 53061, Start Num: 51

Candidate Starts for Yeshua_66:

(Start: 51 @52495 has 6 MA's), (65, 52564), (76, 52633), (79, 52654), (81, 52660), (84, 52675), (88, 52699), (94, 52720), (102, 52786), (103, 52789), (105, 52798), (111, 52846), (113, 52852), (115, 52867), (125, 52930),

Gene: Yinz_71 Start: 57793, Stop: 58392, Start Num: 52

Candidate Starts for Yinz_71:

(Start: 52 @57793 has 45 MA's), (58, 57808), (67, 57862), (83, 57955), (86, 57979), (88, 57988), (97, 58021), (98, 58024), (100, 58048), (103, 58078), (111, 58135), (117, 58174),

Gene: Zemanar_67 Start: 59384, Stop: 59971, Start Num: 53

Candidate Starts for Zemanar_67:

(28, 59249), (29, 59258), (Start: 53 @59384 has 27 MA's), (66, 59450), (67, 59453), (73, 59489), (81, 59540), (88, 59579), (89, 59582), (99, 59636), (100, 59639), (114, 59738), (115, 59747), (124, 59810), (136, 59912),