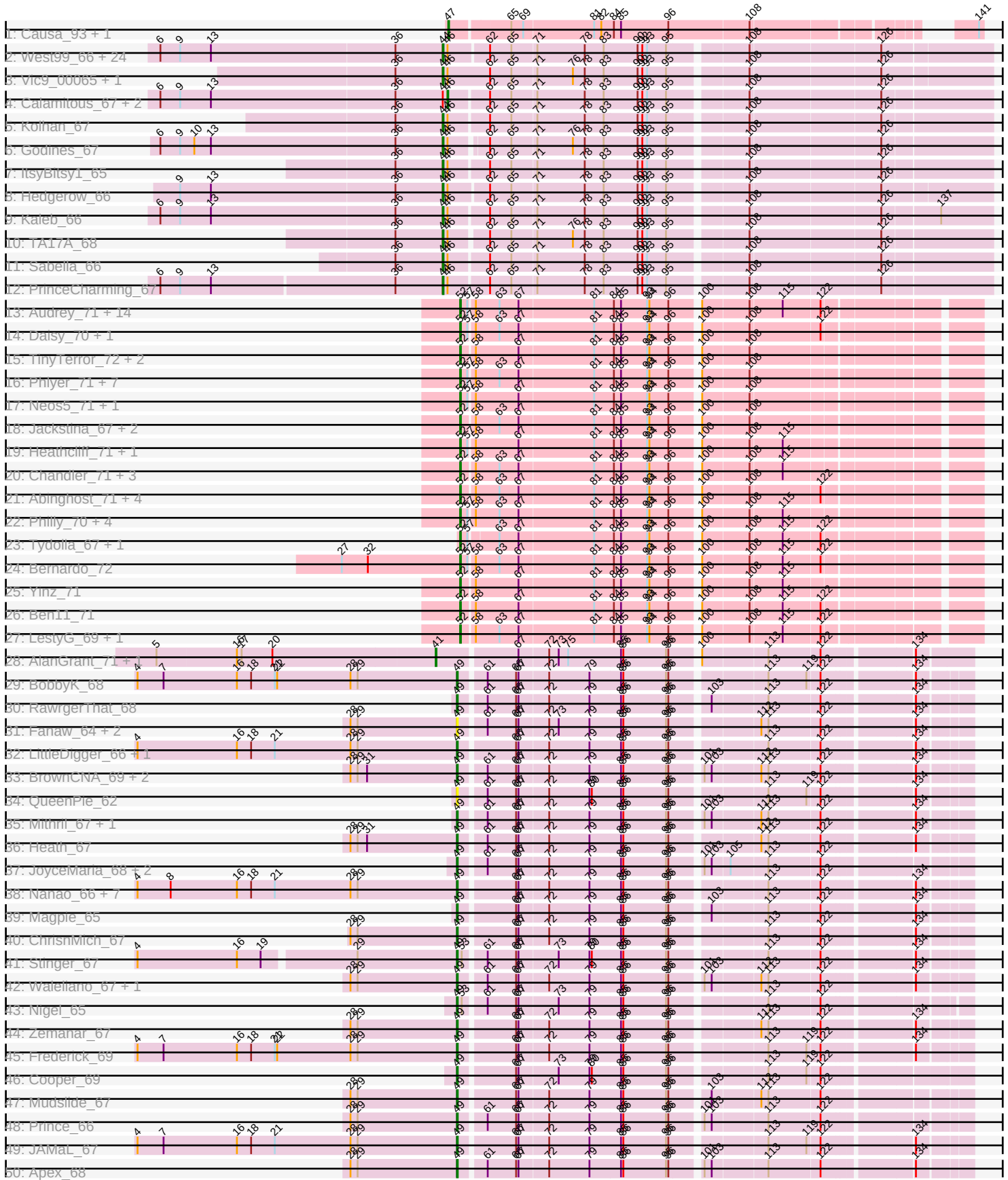
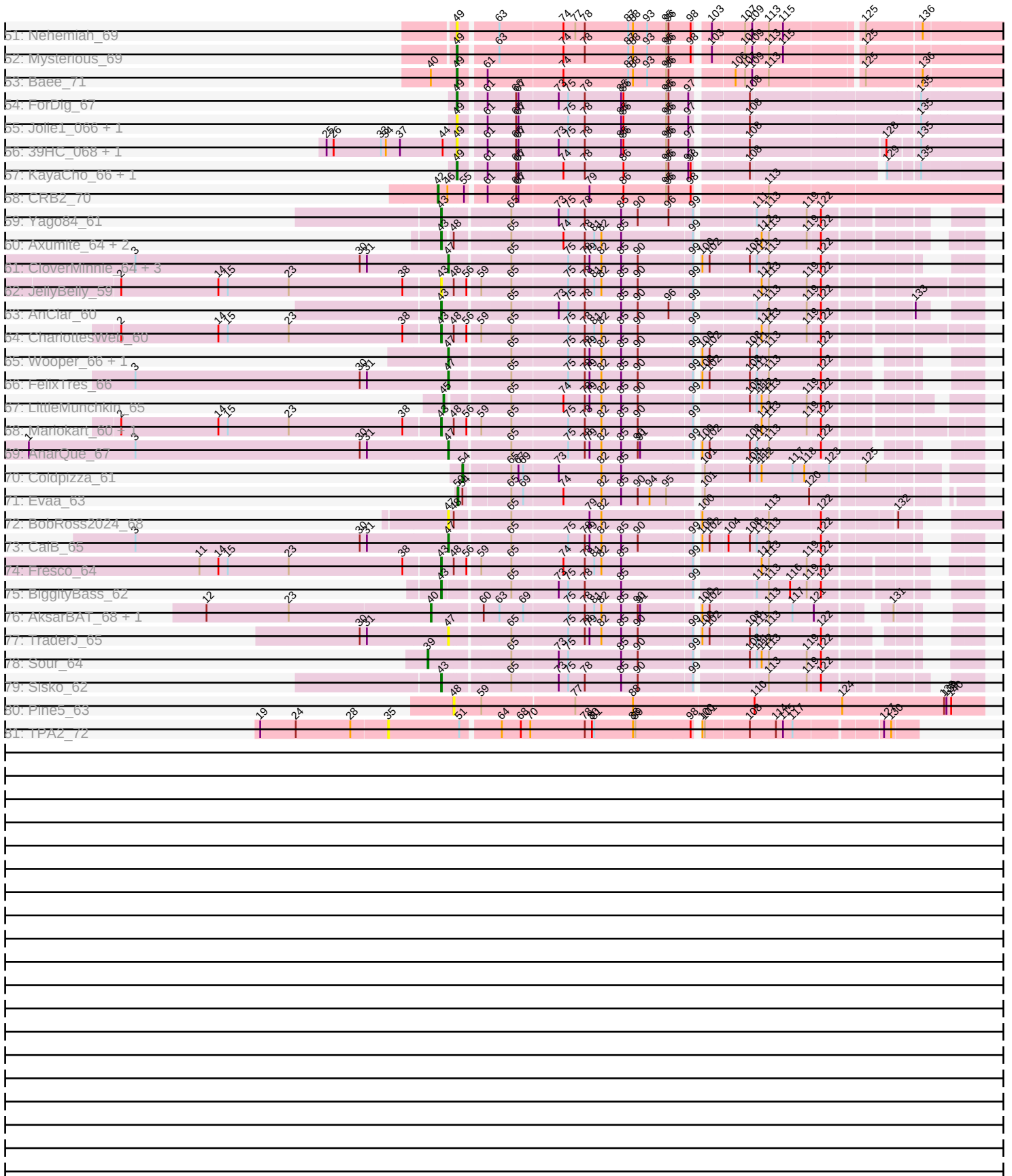




Pham 330522



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 330522 Report

This analysis was run 09/05/26 on database version 662.

Pham number 330522 has 178 members, 29 are drafts.

Phages represented in each track:

- Track 1 : Causa_93, StAugustine_92
- Track 2 : 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 3 : Vic9_00065, Laurie_66
- Track 4 : Calamitous_67, Faze9_65, Boyle_66
- Track 5 : Kolhan_67
- Track 6 : Godines_67
- Track 7 : ItsyBitsy1_65
- Track 8 : Hedgerow_66
- Track 9 : Kaleb_66
- Track 10 : TA17A_68
- Track 11 : Sabella_66
- Track 12 : PrinceCharming_67
- Track 13 : Audrey_71, Athena_73, Baloo_70, Marlia_72, Yahalom_69, Mulaychimus_72, Briakila_71, Corofin_71, RomaT_71, Halfpint_70, SlippinJimmy_74, ChaChing_71, SwainyDoc_72, Gervas_72, Devonte_70
- Track 14 : Daisy_70, SynergyX_71
- Track 15 : TinyTerror_72, MmasiCarm_72, Rita1961_72
- Track 16 : Phlyer_71, Compostia_70, Kronus_71, GlenHope_72, Shenandoah_70, RagingRooster_70, Morty007_70, Marley1013_72
- Track 17 : Neos5_71, Chentzyk_73
- Track 18 : Jackstina_67, Phayeta_74, Mortcellus_71
- Track 19 : Heathcliff_71, Olivio_71
- Track 20 : Chandler_71, Chalmers_70, Gadget_72, Obutu_73
- Track 21 : Abinghost_71, Akoma_71, Nozo_71, OrangeOswald_71, Deenasa_71
- Track 22 : Philly_70, Casbah_71, Kamiyu_71, Phaedrus_66, Glubnar_72
- Track 23 : Tydolla_67, HarveySr_70
- Track 24 : Bernardo_72
- Track 25 : Yinz_71
- Track 26 : Ben11_71
- Track 27 : LestyG_69, Pipefish_74
- Track 28 : AlanGrant_71, Vincenzo_70
- Track 29 : BobbyK_68
- Track 30 : RawrgerThat_68

- Track 31 : Fanaw_64, JaguarMi_68, Xincheng_67
- Track 32 : LittleDigger_66, Renkei_66
- Track 33 : BrownCNA_69, Hangman_68, Hydro_68
- Track 34 : QueenPie_62
- Track 35 : Mithril_67, Fortunato_68
- Track 36 : Heath_67
- Track 37 : JoyceMaria_68, Austelle_67, VioletZ_69
- Track 38 : Nanao_66, Epah_65, Poster_65, Hally898_65, Antihero_65, GinPorsche_67, Ahwei_65, Lambano_65
- Track 39 : Magpie_65
- Track 40 : ChrisnMich_67
- Track 41 : Stinger_67
- Track 42 : Waleliano_67, Lolalove_69
- Track 43 : Nigel_65
- Track 44 : Zemanar_67
- Track 45 : Frederick_69
- Track 46 : Cooper_69
- Track 47 : Mudslide_67
- Track 48 : Prince_66
- Track 49 : JAMaL_67
- Track 50 : Apex_68
- Track 51 : Nehemiah_69
- Track 52 : Mysterious_69
- Track 53 : Baee_71
- Track 54 : ForDig_67
- Track 55 : Jolie1_066, Hosp_064
- Track 56 : 39HC_068, 40BC_068
- Track 57 : KayaCho_66, Minnow_69
- Track 58 : CRB2_70
- Track 59 : Yago84_61
- Track 60 : Axumite_64, Ligma_64, Shatter_64
- Track 61 : CloverMinnie_64, MakoManhole_62, MossRose_65, Blackpen_64
- Track 62 : JellyBelly_59
- Track 63 : AnClar_60
- Track 64 : CharlottesWeb_60
- Track 65 : Wooper_66, Yeshua_65
- Track 66 : FelixTres_66
- Track 67 : LittleMunchkin_65
- Track 68 : Mariokart_60, Coco2012_60
- Track 69 : AnarQue_67
- Track 70 : Coldpizza_61
- Track 71 : Evaa_63
- Track 72 : BobRoss2024_68
- Track 73 : CaiB_65
- Track 74 : Fresco_64
- Track 75 : BiggityBass_62
- Track 76 : AksarBAT_68, NHagos_62
- Track 77 : TraderJ_65
- Track 78 : Sour_64
- Track 79 : Sisko_62
- Track 80 : Pine5_63
- Track 81 : 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 53 of the 149 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_72, Halfpint_70, HarveySr_70, Heathcliff_71, Jackstina_67, Kamiyu_71, Kronus_71, LestyG_69, Marley1013_72, Marlia_72, MmasiCarm_72, Mortcellus_71, Morty007_70, Mulaychimus_72, Neos5_71, Nozo_71, Obutu_73, Olivio_71, OrangeOswald_71, Phaedrüs_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, Baee_71, Bananafish_67, BiggityBass_62, Blackpen_64, Blocker23_66, BobRoss2024_68, BobbyK_68, Boyle_66, BrownCNA_69, Brownie5_66, CRB2_70, CaiB_65, Calamitous_67, Causa_93, CharlottesWeb_60, ChrisnMich_67, CloverMinnie_64, Coco2012_60, Coffee_66, Coldpizza_61, Cooper_69, Eaglehorse_66, Epah_65, Evaa_63, Fanaw_64, Faze9_65, FelixTres_66, ForDig_67, Fortunato_68, Frederick_69, FrenchFry_67, Fresco_64, GinPorsche_67, Glass_67, Godines_67, Hally898_65, Hangman_68, Heath_67, Hedgerow_66, Holeinone_66, Hosp_064, Hydro_68, ItsyBitsy1_65, JAMaL_67, JaguarMi_68, JellyBelly_59, Jolie1_066, JoyceMaria_68, Kaleb_66, KayaCho_66, Kheth_66, Kolhan_67, Lambano_65, Lars_67, Laurie_66, Lephleur_66, Ligma_64, LilSmirk_66, LittleDigger_66, LittleMunchkin_65, LizLemon_66, Lolalove_69, Magpie_65, MakoManhole_62, Mariokart_60, MasterPo_67, Minnow_69, Mithril_67, MossRose_65, Mudslide_67, Mysterious_69, NHagos_62, Nanao_66, Nehemiah_69, Nigel_65, Opia_67, Phantasmagoria_65, Pine5_63, Poster_65, PrinceCharming_67, Prince_66, QueenPie_62, Qyrzula_60, RawrgerThat_68, Renkei_66, Rhinoforte_66, Rosebush_65, Sabella_66, Shatter_64, Sisko_62, Sour_64, StAugustine_92, Stinger_67, TA17A_68, TPA2_72, Tinciduntolum_67, TraderJ_65, Tres_66, Vic9_00065, Vincenzo_70, VioletZ_69, Waleliano_67, West99_66, Wooper_66, Xincheng_67, Yago84_61, Yeshua_65, Zemanar_67,

Summary by start number:

Start 35:

- Found in 1 of 178 (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 39:

- Found in 1 of 178 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 149
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Sour_64 (DR),

Start 40:

- Found in 3 of 178 (1.7%) of genes in pham
- Manual Annotations of this start: 1 of 149
- Called 66.7% of time when present
- Phage (with cluster) where this start called: AksarBAT_68 (DR), NHagos_62 (DR),

Start 41:

- Found in 2 of 178 (1.1%) of genes in pham
- Manual Annotations of this start: 2 of 149
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AlanGrant_71 (B4), Vincenzo_70 (B4),

Start 42:

- Found in 1 of 178 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 149
- Called 100.0% of time when present
- Phage (with cluster) where this start called: CRB2_70 (B9),

Start 43:

- Found in 12 of 178 (6.7%) of genes in pham
- Manual Annotations of this start: 10 of 149
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AnClar_60 (DR), Axumite_64 (DR), BiggityBass_62 (DR), CharlottesWeb_60 (DR), Coco2012_60 (DR), Fresco_64 (DR), JellyBelly_59 (DR), Ligma_64 (DR), Mariokart_60 (DR), Shatter_64 (DR), Sisko_62 (DR), Yago84_61 (DR),

Start 44:

- Found in 40 of 178 (22.5%) of genes in pham
- Manual Annotations of this start: 34 of 149
- Called 87.5% 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_66 (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 45:

- Found in 1 of 178 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 149
- Called 100.0% of time when present
- Phage (with cluster) where this start called: LittleMunchkin_65 (DR),

Start 46:

- Found in 39 of 178 (21.9%) of genes in pham
- Manual Annotations of this start: 3 of 149
- Called 7.7% of time when present
- Phage (with cluster) where this start called: Boyle_66 (B2), Calamitous_67 (B2), Faze9_65 (B2),

Start 47:

- Found in 13 of 178 (7.3%) of genes in pham
- Manual Annotations of this start: 10 of 149
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AnarQue_67 (DR), Blackpen_64 (DR), BobRoss2024_68 (DR), CaiB_65 (DR), Causa_93 (AI), CloverMinnie_64 (DR), FelixTres_66 (DR), MakoManhole_62 (DR), MossRose_65 (DR), StAugustine_92 (AI), TraderJ_65 (DR), Wooper_66 (DR), Yeshua_65 (DR),

Start 48:

- Found in 10 of 178 (5.6%) of genes in pham
- No Manual Annotations of this start.
- Called 10.0% of time when present
- Phage (with cluster) where this start called: Pine5_63 (singleton),

Start 49:

- Found in 48 of 178 (27.0%) of genes in pham
- Manual Annotations of this start: 31 of 149
- Called 100.0% 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), Baee_71 (B5), BobbyK_68 (B4), BrownCNA_69 (B4), ChrisnMich_67 (B4), Cooper_69 (B4), Epah_65 (B4), Fanaw_64 (B4), ForDig_67 (B6), Fortunato_68 (B4), Frederick_69 (B4), GinPorsche_67 (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), JoyceMaria_68 (B4), KayaCho_66 (B6), Lambano_65 (B4), LittleDigger_66 (B4), Lolalove_69 (B4), Magpie_65 (B4), Minnow_69 (B6), Mithril_67 (B4), Mudslide_67 (B4), Mysterious_69 (B5), Nanao_66 (B4), Nehemiah_69 (B5), Nigel_65 (B4), Poster_65 (B4), Prince_66 (B4), QueenPie_62 (B4), RawrgerThat_68 (B4), Renkei_66 (B4), Stinger_67 (B4), VioletZ_69 (B4), Waleliano_67 (B4), Xincheng_67 (B4), Zemanar_67 (B4),

Start 50:

- Found in 1 of 178 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 149
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Evaa_63 (DR),

Start 52:

- Found in 56 of 178 (31.5%) of genes in pham
- Manual Annotations of this start: 53 of 149
- 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_72 (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), Mulaychimus_72 (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 54:

- Found in 2 of 178 (1.1%) of genes in pham
- Manual Annotations of this start: 1 of 149
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Coldpizza_61 (DR),

Summary by clusters:

There are 9 clusters represented in this pham: singleton, A1, B4, B5, B6, B2, B3, DR, B9,

Info for manual annotations of cluster A1:

- Start number 47 was manually annotated 2 times for cluster A1.

Info for manual annotations of cluster B2:

- Start number 44 was manually annotated 34 times for cluster B2.
- Start number 46 was manually annotated 3 times for cluster B2.

Info for manual annotations of cluster B3:

- Start number 52 was manually annotated 53 times for cluster B3.

Info for manual annotations of cluster B4:

- Start number 41 was manually annotated 2 times for cluster B4.
- Start number 49 was manually annotated 27 times for cluster B4.

Info for manual annotations of cluster B5:

- Start number 49 was manually annotated 2 times for cluster B5.

Info for manual annotations of cluster B6:

- Start number 49 was manually annotated 2 times for cluster B6.

Info for manual annotations of cluster B9:

- Start number 42 was manually annotated 1 time for cluster B9.

Info for manual annotations of cluster DR:

- Start number 39 was manually annotated 1 time for cluster DR.
- Start number 40 was manually annotated 1 time for cluster DR.
- Start number 43 was manually annotated 10 times for cluster DR.
- Start number 45 was manually annotated 1 time for cluster DR.
- Start number 47 was manually annotated 8 times for cluster DR.
- Start number 50 was manually annotated 1 time for cluster DR.

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

Gene Information:

Gene: 39HC_068 Start: 58083, Stop: 58772, Start Num: 49

Candidate Starts for 39HC_068:

(25, 57918), (26, 57927), (33, 57987), (34, 57993), (37, 58011), (Start: 44 @58065 has 34 MA's), (Start: 49 @58083 has 31 MA's), (61, 58113), (66, 58149), (67, 58152), (73, 58200), (75, 58212), (78, 58233), (85, 58278), (86, 58281), (95, 58335), (96, 58338), (97, 58362), (108, 58425), (128, 58581), (135, 58614),

Gene: 40BC_068 Start: 58083, Stop: 58772, Start Num: 49

Candidate Starts for 40BC_068:

(25, 57918), (26, 57927), (33, 57987), (34, 57993), (37, 58011), (Start: 44 @58065 has 34 MA's), (Start: 49 @58083 has 31 MA's), (61, 58113), (66, 58149), (67, 58152), (73, 58200), (75, 58212), (78, 58233), (85, 58278), (86, 58281), (95, 58335), (96, 58338), (97, 58362), (108, 58425), (128, 58581), (135, 58614),

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

Candidate Starts for Abinghost_71:

(Start: 52 @57879 has 53 MA's), (58, 57894), (63, 57924), (67, 57948), (81, 58041), (84, 58065), (85, 58074), (93, 58107), (94, 58110), (96, 58134), (100, 58164), (108, 58221), (122, 58305),

Gene: Ahwei_65 Start: 58476, Stop: 59063, Start Num: 49

Candidate Starts for Ahwei_65:

(4, 58071), (8, 58113), (16, 58197), (18, 58215), (21, 58245), (28, 58341), (29, 58350), (Start: 49 @58476 has 31 MA's), (66, 58542), (67, 58545), (72, 58581), (79, 58632), (85, 58671), (86, 58674), (95, 58728), (96, 58731), (113, 58839), (122, 58902), (134, 59004),

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

Candidate Starts for Akoma_71:

(Start: 52 @57919 has 53 MA's), (58, 57934), (63, 57964), (67, 57988), (81, 58081), (84, 58105), (85, 58114), (93, 58147), (94, 58150), (96, 58174), (100, 58204), (108, 58261), (122, 58345),

Gene: AksarBAT_68 Start: 53011, Stop: 53595, Start Num: 40

Candidate Starts for AksarBAT_68:

(12, 52732), (23, 52834), (Start: 40 @53011 has 1 MA's), (60, 53071), (63, 53089), (69, 53119), (75, 53173), (78, 53194), (81, 53206), (82, 53215), (85, 53239), (90, 53260), (91, 53263), (100, 53329), (102, 53338), (113, 53407), (117, 53437), (121, 53461), (131, 53530),

Gene: AlanGrant_71 Start: 60795, Stop: 61415, Start Num: 41

Candidate Starts for AlanGrant_71:

(5, 60447), (16, 60546), (17, 60552), (20, 60591), (Start: 41 @60795 has 2 MA's), (67, 60891), (72, 60927), (73, 60939), (75, 60951), (85, 61017), (86, 61020), (95, 61074), (96, 61077), (100, 61107), (113, 61185), (122, 61248), (134, 61350),

Gene: Allegro_66 Start: 56167, Stop: 56817, Start Num: 44

Candidate Starts for Allegro_66:

(6, 55813), (9, 55837), (13, 55876), (36, 56107), (Start: 44 @56167 has 34 MA's), (Start: 46 @56173 has 3 MA's), (62, 56218), (65, 56245), (71, 56275), (78, 56335), (83, 56359), (90, 56401), (92, 56407), (93, 56413), (95, 56437), (108, 56527), (126, 56683),

Gene: AnClar_60 Start: 52491, Stop: 53087, Start Num: 43

Candidate Starts for AnClar_60:

(Start: 43 @52491 has 10 MA's), (65, 52569), (73, 52626), (75, 52638), (78, 52659), (85, 52704), (90, 52725), (96, 52764), (99, 52791), (111, 52857), (113, 52872), (119, 52920), (122, 52935), (133, 53031),

Gene: AnarQue_67 Start: 53185, Stop: 53751, Start Num: 47

Candidate Starts for AnarQue_67:

(1, 52657), (3, 52792), (30, 53074), (31, 53083), (Start: 47 @53185 has 10 MA's), (65, 53254), (75, 53323), (78, 53344), (79, 53350), (82, 53365), (85, 53389), (90, 53410), (91, 53413), (99, 53476), (100, 53479), (102, 53488), (108, 53536), (111, 53542), (113, 53557), (122, 53620),

Gene: Antihero_65 Start: 58474, Stop: 59061, Start Num: 49

Candidate Starts for Antihero_65:

(4, 58069), (8, 58111), (16, 58195), (18, 58213), (21, 58243), (28, 58339), (29, 58348), (Start: 49 @58474 has 31 MA's), (66, 58540), (67, 58543), (72, 58579), (79, 58630), (85, 58669), (86, 58672), (95, 58726), (96, 58729), (113, 58837), (122, 58900), (134, 59002),

Gene: Apex_68 Start: 59579, Stop: 60166, Start Num: 49

Candidate Starts for Apex_68:

(28, 59444), (29, 59453), (Start: 49 @59579 has 31 MA's), (61, 59609), (66, 59645), (67, 59648), (72, 59684), (79, 59735), (85, 59774), (86, 59777), (95, 59831), (96, 59834), (101, 59867), (103, 59876), (113, 59942), (122, 60005), (134, 60107),

Gene: Arbiter_64 Start: 56199, Stop: 56852, Start Num: 44

Candidate Starts for Arbiter_64:

(6, 55845), (9, 55869), (13, 55908), (36, 56139), (Start: 44 @56199 has 34 MA's), (Start: 46 @56205 has 3 MA's), (62, 56253), (65, 56280), (71, 56310), (78, 56370), (83, 56394), (90, 56436), (92, 56442), (93, 56448), (95, 56472), (108, 56562), (126, 56718),

Gene: Ares_66 Start: 56170, Stop: 56823, Start Num: 44

Candidate Starts for Ares_66:

(6, 55816), (9, 55840), (13, 55879), (36, 56110), (Start: 44 @56170 has 34 MA's), (Start: 46 @56176 has 3 MA's), (62, 56224), (65, 56251), (71, 56281), (78, 56341), (83, 56365), (90, 56407), (92, 56413), (93, 56419), (95, 56443), (108, 56533), (126, 56689),

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

Candidate Starts for Athena_73:

(Start: 52 @58654 has 53 MA's), (57, 58663), (58, 58669), (63, 58699), (67, 58723), (81, 58816), (84, 58840), (85, 58849), (93, 58882), (94, 58885), (96, 58909), (100, 58939), (108, 58996), (115, 59035), (122, 59080),

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

Candidate Starts for Audrey_71:

(Start: 52 @57918 has 53 MA's), (57, 57927), (58, 57933), (63, 57963), (67, 57987), (81, 58080), (84, 58104), (85, 58113), (93, 58146), (94, 58149), (96, 58173), (100, 58203), (108, 58260), (115, 58299), (122, 58344),

Gene: Austelle_67 Start: 60096, Stop: 60683, Start Num: 49

Candidate Starts for Austelle_67:

(Start: 49 @60096 has 31 MA's), (61, 60126), (66, 60162), (67, 60165), (72, 60201), (79, 60252), (85, 60291), (86, 60294), (95, 60348), (96, 60351), (101, 60384), (103, 60393), (105, 60414), (113, 60459),

(122, 60522),

Gene: Axumite_64 Start: 51329, Stop: 51919, Start Num: 43

Candidate Starts for Axumite_64:

(Start: 43 @51329 has 10 MA's), (48, 51338), (65, 51401), (74, 51464), (78, 51491), (81, 51503), (82, 51512), (85, 51536), (99, 51623), (112, 51695), (113, 51704), (119, 51752), (122, 51767),

Gene: Baee_71 Start: 60200, Stop: 60841, Start Num: 49

Candidate Starts for Baee_71:

(Start: 40 @60167 has 1 MA's), (Start: 49 @60200 has 31 MA's), (61, 60230), (74, 60323), (87, 60404), (88, 60410), (93, 60428), (95, 60452), (96, 60455), (106, 60524), (107, 60536), (109, 60545), (113, 60563), (125, 60671), (136, 60737),

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

Candidate Starts for Baloo_70:

(Start: 52 @57751 has 53 MA's), (57, 57760), (58, 57766), (63, 57796), (67, 57820), (81, 57913), (84, 57937), (85, 57946), (93, 57979), (94, 57982), (96, 58006), (100, 58036), (108, 58093), (115, 58132), (122, 58177),

Gene: Bananafish_67 Start: 56100, Stop: 56753, Start Num: 44

Candidate Starts for Bananafish_67:

(6, 55746), (9, 55770), (13, 55809), (36, 56040), (Start: 44 @56100 has 34 MA's), (Start: 46 @56106 has 3 MA's), (62, 56154), (65, 56181), (71, 56211), (78, 56271), (83, 56295), (90, 56337), (92, 56343), (93, 56349), (95, 56373), (108, 56463), (126, 56619),

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

Candidate Starts for Ben11_71:

(Start: 52 @58136 has 53 MA's), (58, 58151), (67, 58205), (81, 58298), (84, 58322), (85, 58331), (93, 58364), (94, 58367), (96, 58391), (100, 58421), (108, 58478), (115, 58517), (122, 58562),

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

Candidate Starts for Bernardo_72:

(27, 57967), (32, 58000), (Start: 52 @58117 has 53 MA's), (57, 58126), (58, 58132), (63, 58162), (67, 58186), (81, 58279), (84, 58303), (85, 58312), (93, 58345), (94, 58348), (96, 58372), (100, 58402), (108, 58459), (115, 58498), (122, 58543),

Gene: BiggityBass_62 Start: 53047, Stop: 53640, Start Num: 43

Candidate Starts for BiggityBass_62:

(Start: 43 @53047 has 10 MA's), (65, 53122), (73, 53179), (75, 53191), (78, 53212), (85, 53257), (99, 53344), (111, 53410), (113, 53425), (116, 53452), (119, 53473), (122, 53488),

Gene: Blackpen_64 Start: 51624, Stop: 52205, Start Num: 47

Candidate Starts for Blackpen_64:

(3, 51231), (30, 51513), (31, 51522), (Start: 47 @51624 has 10 MA's), (65, 51693), (75, 51762), (78, 51783), (79, 51789), (82, 51804), (85, 51828), (90, 51849), (99, 51915), (100, 51918), (102, 51927), (108, 51975), (111, 51981), (113, 51996), (122, 52059),

Gene: Blocker23_66 Start: 56167, Stop: 56817, Start Num: 44

Candidate Starts for Blocker23_66:

(6, 55813), (9, 55837), (13, 55876), (36, 56107), (Start: 44 @56167 has 34 MA's), (Start: 46 @56173 has 3 MA's), (62, 56218), (65, 56245), (71, 56275), (78, 56335), (83, 56359), (90, 56401), (92, 56407), (93, 56413), (95, 56437), (108, 56527), (126, 56683),

Gene: BobRoss2024_68 Start: 52748, Stop: 53359, Start Num: 47

Candidate Starts for BobRoss2024_68:

(Start: 47 @52748 has 10 MA's), (48, 52754), (65, 52817), (79, 52913), (82, 52928), (100, 53042), (113, 53120), (122, 53183), (132, 53264),

Gene: BobbyK_68 Start: 59356, Stop: 59943, Start Num: 49

Candidate Starts for BobbyK_68:

(4, 58951), (7, 58984), (16, 59077), (18, 59095), (21, 59125), (22, 59128), (28, 59221), (29, 59230), (Start: 49 @59356 has 31 MA's), (61, 59386), (66, 59422), (67, 59425), (72, 59461), (79, 59512), (85, 59551), (86, 59554), (95, 59608), (96, 59611), (113, 59719), (119, 59767), (122, 59782), (134, 59884),

Gene: Boyle_66 Start: 56214, Stop: 56861, Start Num: 46

Candidate Starts for Boyle_66:

(6, 55854), (9, 55878), (13, 55917), (36, 56148), (Start: 44 @56208 has 34 MA's), (Start: 46 @56214 has 3 MA's), (62, 56262), (65, 56289), (71, 56319), (78, 56379), (83, 56403), (90, 56445), (92, 56451), (93, 56457), (95, 56481), (108, 56571), (126, 56727),

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

Candidate Starts for Briakila_71:

(Start: 52 @58117 has 53 MA's), (57, 58126), (58, 58132), (63, 58162), (67, 58186), (81, 58279), (84, 58303), (85, 58312), (93, 58345), (94, 58348), (96, 58372), (100, 58402), (108, 58459), (115, 58498), (122, 58543),

Gene: BrownCNA_69 Start: 59733, Stop: 60320, Start Num: 49

Candidate Starts for BrownCNA_69:

(28, 59598), (29, 59607), (31, 59619), (Start: 49 @59733 has 31 MA's), (61, 59763), (66, 59799), (67, 59802), (72, 59838), (79, 59889), (85, 59928), (86, 59931), (95, 59985), (96, 59988), (101, 60021), (103, 60030), (112, 60087), (113, 60096), (122, 60159), (134, 60261),

Gene: Brownie5_66 Start: 56210, Stop: 56863, Start Num: 44

Candidate Starts for Brownie5_66:

(6, 55856), (9, 55880), (13, 55919), (36, 56150), (Start: 44 @56210 has 34 MA's), (Start: 46 @56216 has 3 MA's), (62, 56264), (65, 56291), (71, 56321), (78, 56381), (83, 56405), (90, 56447), (92, 56453), (93, 56459), (95, 56483), (108, 56573), (126, 56729),

Gene: CRB2_70 Start: 60958, Stop: 61668, Start Num: 42

Candidate Starts for CRB2_70:

(Start: 42 @60958 has 1 MA's), (Start: 46 @60970 has 3 MA's), (55, 60991), (61, 61012), (66, 61048), (67, 61051), (79, 61138), (86, 61180), (95, 61234), (96, 61237), (98, 61264), (113, 61345),

Gene: CaiB_65 Start: 52969, Stop: 53550, Start Num: 47

Candidate Starts for CaiB_65:

(3, 52576), (30, 52858), (31, 52867), (Start: 47 @52969 has 10 MA's), (65, 53038), (75, 53107), (78, 53128), (79, 53134), (82, 53149), (85, 53173), (90, 53194), (99, 53260), (100, 53263), (102, 53272), (104, 53293), (108, 53320), (111, 53326), (113, 53341), (122, 53404),

Gene: Calamitous_67 Start: 56104, Stop: 56751, Start Num: 46

Candidate Starts for Calamitous_67:

(6, 55744), (9, 55768), (13, 55807), (36, 56038), (Start: 44 @56098 has 34 MA's), (Start: 46 @56104 has 3 MA's), (62, 56152), (65, 56179), (71, 56209), (78, 56269), (83, 56293), (90, 56335), (92, 56341), (93, 56347), (95, 56371), (108, 56461), (126, 56617),

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

Candidate Starts for Casbah_71:

(Start: 52 @58238 has 53 MA's), (57, 58247), (58, 58253), (63, 58283), (67, 58307), (81, 58400), (84, 58424), (85, 58433), (93, 58466), (94, 58469), (96, 58493), (100, 58523), (108, 58580), (115, 58619),

Gene: Causa_93 Start: 67664, Stop: 68245, Start Num: 47

Candidate Starts for Causa_93:

(Start: 47 @67664 has 10 MA's), (65, 67733), (69, 67748), (81, 67835), (82, 67844), (84, 67859), (85, 67868), (96, 67928), (108, 68027), (141, 68240),

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

Candidate Starts for ChaChing_71:

(Start: 52 @57936 has 53 MA's), (57, 57945), (58, 57951), (63, 57981), (67, 58005), (81, 58098), (84, 58122), (85, 58131), (93, 58164), (94, 58167), (96, 58191), (100, 58221), (108, 58278), (115, 58317), (122, 58362),

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

Candidate Starts for Chalmers_70:

(Start: 52 @58369 has 53 MA's), (58, 58384), (63, 58414), (67, 58438), (81, 58531), (84, 58555), (85, 58564), (93, 58597), (94, 58600), (96, 58624), (100, 58654), (108, 58711), (115, 58750),

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

Candidate Starts for Chandler_71:

(Start: 52 @58698 has 53 MA's), (58, 58713), (63, 58743), (67, 58767), (81, 58860), (84, 58884), (85, 58893), (93, 58926), (94, 58929), (96, 58953), (100, 58983), (108, 59040), (115, 59079),

Gene: CharlottesWeb_60 Start: 49910, Stop: 50527, Start Num: 43

Candidate Starts for CharlottesWeb_60:

(2, 49511), (14, 49634), (15, 49646), (23, 49721), (38, 49865), (Start: 43 @49910 has 10 MA's), (48, 49925), (56, 49940), (59, 49952), (65, 49988), (75, 50057), (78, 50078), (81, 50090), (82, 50099), (85, 50123), (90, 50144), (99, 50210), (112, 50282), (113, 50291), (119, 50339), (122, 50354),

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

Candidate Starts for Chentzyk_73:

(Start: 52 @58869 has 53 MA's), (57, 58878), (58, 58884), (67, 58938), (81, 59031), (84, 59055), (85, 59064), (93, 59097), (94, 59100), (96, 59124), (100, 59154), (108, 59211),

Gene: ChrisnMich_67 Start: 58458, Stop: 59045, Start Num: 49

Candidate Starts for ChrisnMich_67:

(28, 58323), (29, 58332), (Start: 49 @58458 has 31 MA's), (66, 58524), (67, 58527), (72, 58563), (79, 58614), (85, 58653), (86, 58656), (95, 58710), (96, 58713), (113, 58821), (122, 58884), (134, 58986),

Gene: CloverMinnie_64 Start: 52132, Stop: 52713, Start Num: 47

Candidate Starts for CloverMinnie_64:

(3, 51739), (30, 52021), (31, 52030), (Start: 47 @52132 has 10 MA's), (65, 52201), (75, 52270), (78, 52291), (79, 52297), (82, 52312), (85, 52336), (90, 52357), (99, 52423), (100, 52426), (102, 52435), (108, 52483), (111, 52489), (113, 52504), (122, 52567),

Gene: Coco2012_60 Start: 49901, Stop: 50518, Start Num: 43

Candidate Starts for Coco2012_60:

(2, 49502), (14, 49625), (15, 49637), (23, 49712), (38, 49856), (Start: 43 @49901 has 10 MA's), (48, 49916), (56, 49931), (59, 49943), (65, 49979), (75, 50048), (78, 50069), (82, 50090), (85, 50114), (90, 50135), (99, 50201), (112, 50273), (113, 50282), (119, 50330), (122, 50345),

Gene: Coffee_66 Start: 56202, Stop: 56855, Start Num: 44

Candidate Starts for Coffee_66:

(6, 55848), (9, 55872), (13, 55911), (36, 56142), (Start: 44 @56202 has 34 MA's), (Start: 46 @56208 has 3 MA's), (62, 56256), (65, 56283), (71, 56313), (78, 56373), (83, 56397), (90, 56439), (92, 56445), (93, 56451), (95, 56475), (108, 56565), (126, 56721),

Gene: Coldpizza_61 Start: 52645, Stop: 53241, Start Num: 54

Candidate Starts for Coldpizza_61:

(Start: 54 @52645 has 1 MA's), (65, 52699), (67, 52708), (69, 52714), (73, 52756), (82, 52810), (85, 52834), (101, 52927), (108, 52981), (111, 52987), (112, 52993), (117, 53032), (118, 53047), (123, 53074), (125, 53113),

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

Candidate Starts for Compostia_70:

(Start: 52 @58319 has 53 MA's), (57, 58328), (58, 58334), (63, 58364), (67, 58388), (81, 58481), (84, 58505), (85, 58514), (93, 58547), (94, 58550), (96, 58574), (100, 58604), (108, 58661),

Gene: Cooper_69 Start: 59149, Stop: 59742, Start Num: 49

Candidate Starts for Cooper_69:

(Start: 49 @59149 has 31 MA's), (66, 59215), (67, 59218), (73, 59266), (79, 59305), (80, 59308), (85, 59344), (86, 59347), (95, 59401), (96, 59404), (113, 59512), (119, 59560), (122, 59575),

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

Candidate Starts for Corofin_71:

(Start: 52 @57949 has 53 MA's), (57, 57958), (58, 57964), (63, 57994), (67, 58018), (81, 58111), (84, 58135), (85, 58144), (93, 58177), (94, 58180), (96, 58204), (100, 58234), (108, 58291), (115, 58330), (122, 58375),

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

Candidate Starts for Daisy_70:

(Start: 52 @57482 has 53 MA's), (57, 57491), (58, 57497), (63, 57527), (67, 57551), (81, 57644), (84, 57668), (85, 57677), (93, 57710), (94, 57713), (96, 57737), (100, 57767), (108, 57824), (122, 57908),

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

Candidate Starts for Deenasa_71:

(Start: 52 @58785 has 53 MA's), (58, 58800), (63, 58830), (67, 58854), (81, 58947), (84, 58971), (85, 58980), (93, 59013), (94, 59016), (96, 59040), (100, 59070), (108, 59127), (122, 59211),

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

Candidate Starts for Devonte_70:

(Start: 52 @57561 has 53 MA's), (57, 57570), (58, 57576), (63, 57606), (67, 57630), (81, 57723), (84, 57747), (85, 57756), (93, 57789), (94, 57792), (96, 57816), (100, 57846), (108, 57903), (115, 57942), (122, 57987),

Gene: Eaglehorse_66 Start: 56088, Stop: 56741, Start Num: 44

Candidate Starts for Eaglehorse_66:

(6, 55734), (9, 55758), (13, 55797), (36, 56028), (Start: 44 @56088 has 34 MA's), (Start: 46 @56094 has 3 MA's), (62, 56142), (65, 56169), (71, 56199), (78, 56259), (83, 56283), (90, 56325), (92, 56331), (93, 56337), (95, 56361), (108, 56451), (126, 56607),

Gene: Epah_65 Start: 58474, Stop: 59061, Start Num: 49

Candidate Starts for Epah_65:

(4, 58069), (8, 58111), (16, 58195), (18, 58213), (21, 58243), (28, 58339), (29, 58348), (Start: 49 @58474 has 31 MA's), (66, 58540), (67, 58543), (72, 58579), (79, 58630), (85, 58669), (86, 58672), (95, 58726), (96, 58729), (113, 58837), (122, 58900), (134, 59002),

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

Candidate Starts for Evaa_63:

(Start: 50 @50521 has 1 MA's), (Start: 54 @50527 has 1 MA's), (65, 50578), (69, 50593), (74, 50641), (82, 50689), (85, 50713), (90, 50734), (94, 50749), (95, 50770), (101, 50806), (120, 50932),

Gene: Fanaw_64 Start: 59510, Stop: 60097, Start Num: 49

Candidate Starts for Fanaw_64:

(28, 59375), (29, 59384), (Start: 49 @59510 has 31 MA's), (61, 59540), (66, 59576), (67, 59579), (72, 59615), (73, 59627), (79, 59666), (85, 59705), (86, 59708), (95, 59762), (96, 59765), (112, 59864), (113, 59873), (122, 59936), (134, 60038),

Gene: Faze9_65 Start: 56233, Stop: 56880, Start Num: 46

Candidate Starts for Faze9_65:

(6, 55873), (9, 55897), (13, 55936), (36, 56167), (Start: 44 @56227 has 34 MA's), (Start: 46 @56233 has 3 MA's), (62, 56281), (65, 56308), (71, 56338), (78, 56398), (83, 56422), (90, 56464), (92, 56470), (93, 56476), (95, 56500), (108, 56590), (126, 56746),

Gene: FelixTres_66 Start: 52439, Stop: 53005, Start Num: 47

Candidate Starts for FelixTres_66:

(3, 52046), (30, 52328), (31, 52337), (Start: 47 @52439 has 10 MA's), (65, 52508), (75, 52577), (78, 52598), (79, 52604), (82, 52619), (85, 52643), (90, 52664), (99, 52730), (100, 52733), (102, 52742), (108, 52790), (111, 52796), (113, 52811), (122, 52874),

Gene: ForDig_67 Start: 58034, Stop: 58732, Start Num: 49

Candidate Starts for ForDig_67:

(Start: 49 @58034 has 31 MA's), (61, 58064), (66, 58100), (67, 58103), (73, 58151), (75, 58163), (78, 58184), (85, 58229), (86, 58232), (95, 58286), (96, 58289), (97, 58313), (108, 58376), (135, 58574),

Gene: Fortunato_68 Start: 59509, Stop: 60096, Start Num: 49

Candidate Starts for Fortunato_68:

(Start: 49 @59509 has 31 MA's), (61, 59539), (66, 59575), (67, 59578), (72, 59614), (79, 59665), (85, 59704), (86, 59707), (95, 59761), (96, 59764), (101, 59797), (103, 59806), (112, 59863), (113, 59872), (122, 59935), (134, 60037),

Gene: Frederick_69 Start: 59456, Stop: 60043, Start Num: 49

Candidate Starts for Frederick_69:

(4, 59051), (7, 59084), (16, 59177), (18, 59195), (21, 59225), (22, 59228), (28, 59321), (29, 59330), (Start: 49 @59456 has 31 MA's), (66, 59522), (67, 59525), (72, 59561), (79, 59612), (85, 59651), (86, 59654), (95, 59708), (96, 59711), (113, 59819), (119, 59867), (122, 59882), (134, 59984),

Gene: FrenchFry_67 Start: 56213, Stop: 56866, Start Num: 44

Candidate Starts for FrenchFry_67:

(6, 55859), (9, 55883), (13, 55922), (36, 56153), (Start: 44 @56213 has 34 MA's), (Start: 46 @56219 has 3 MA's), (62, 56267), (65, 56294), (71, 56324), (78, 56384), (83, 56408), (90, 56450), (92, 56456), (93, 56462), (95, 56486), (108, 56576), (126, 56732),

Gene: Fresco_64 Start: 51329, Stop: 51925, Start Num: 43

Candidate Starts for Fresco_64:

(11, 51029), (14, 51053), (15, 51065), (23, 51140), (38, 51284), (Start: 43 @51329 has 10 MA's), (48, 51344), (56, 51359), (59, 51371), (65, 51407), (74, 51470), (78, 51497), (81, 51509), (82, 51518), (85, 51542), (99, 51629), (112, 51701), (113, 51710), (119, 51758), (122, 51773),

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

Candidate Starts for Gadget_72:

(Start: 52 @58249 has 53 MA's), (58, 58264), (63, 58294), (67, 58318), (81, 58411), (84, 58435), (85, 58444), (93, 58477), (94, 58480), (96, 58504), (100, 58534), (108, 58591), (115, 58630),

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

Candidate Starts for Gervas_72:

(Start: 52 @58343 has 53 MA's), (57, 58352), (58, 58358), (63, 58388), (67, 58412), (81, 58505), (84, 58529), (85, 58538), (93, 58571), (94, 58574), (96, 58598), (100, 58628), (108, 58685), (115, 58724), (122, 58769),

Gene: GinPorsche_67 Start: 58474, Stop: 59061, Start Num: 49

Candidate Starts for GinPorsche_67:

(4, 58069), (8, 58111), (16, 58195), (18, 58213), (21, 58243), (28, 58339), (29, 58348), (Start: 49 @58474 has 31 MA's), (66, 58540), (67, 58543), (72, 58579), (79, 58630), (85, 58669), (86, 58672), (95, 58726), (96, 58729), (113, 58837), (122, 58900), (134, 59002),

Gene: Glass_67 Start: 56215, Stop: 56868, Start Num: 44

Candidate Starts for Glass_67:

(6, 55861), (9, 55885), (13, 55924), (36, 56155), (Start: 44 @56215 has 34 MA's), (Start: 46 @56221 has 3 MA's), (62, 56269), (65, 56296), (71, 56326), (78, 56386), (83, 56410), (90, 56452), (92, 56458), (93, 56464), (95, 56488), (108, 56578), (126, 56734),

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

Candidate Starts for GlenHope_72:

(Start: 52 @57909 has 53 MA's), (57, 57918), (58, 57924), (63, 57954), (67, 57978), (81, 58071), (84, 58095), (85, 58104), (93, 58137), (94, 58140), (96, 58164), (100, 58194), (108, 58251),

Gene: Glubnar_72 Start: 57815, Stop: 58414, Start Num: 52

Candidate Starts for Glubnar_72:

(Start: 52 @57815 has 53 MA's), (57, 57824), (58, 57830), (63, 57860), (67, 57884), (81, 57977), (84, 58001), (85, 58010), (93, 58043), (94, 58046), (96, 58070), (100, 58100), (108, 58157), (115, 58196),

Gene: Godines_67 Start: 56471, Stop: 57118, Start Num: 44

Candidate Starts for Godines_67:

(6, 56117), (9, 56141), (10, 56159), (13, 56180), (36, 56411), (Start: 44 @56471 has 34 MA's), (Start: 46 @56477 has 3 MA's), (62, 56519), (65, 56546), (71, 56576), (76, 56621), (78, 56636), (83, 56660), (90, 56702), (92, 56708), (93, 56714), (95, 56738), (108, 56828), (126, 56984),

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

Candidate Starts for Halfpint_70:

(Start: 52 @57660 has 53 MA's), (57, 57669), (58, 57675), (63, 57705), (67, 57729), (81, 57822), (84, 57846), (85, 57855), (93, 57888), (94, 57891), (96, 57915), (100, 57945), (108, 58002), (115, 58041), (122, 58086),

Gene: Hally898_65 Start: 58489, Stop: 59076, Start Num: 49

Candidate Starts for Hally898_65:

(4, 58084), (8, 58126), (16, 58210), (18, 58228), (21, 58258), (28, 58354), (29, 58363), (Start: 49 @58489 has 31 MA's), (66, 58555), (67, 58558), (72, 58594), (79, 58645), (85, 58684), (86, 58687),

(95, 58741), (96, 58744), (113, 58852), (122, 58915), (134, 59017),

Gene: Hangman_68 Start: 59655, Stop: 60242, Start Num: 49

Candidate Starts for Hangman_68:

(28, 59520), (29, 59529), (31, 59541), (Start: 49 @59655 has 31 MA's), (61, 59685), (66, 59721), (67, 59724), (72, 59760), (79, 59811), (85, 59850), (86, 59853), (95, 59907), (96, 59910), (101, 59943), (103, 59952), (112, 60009), (113, 60018), (122, 60081), (134, 60183),

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

Candidate Starts for HarveySr_70:

(Start: 52 @57468 has 53 MA's), (57, 57477), (63, 57510), (67, 57534), (81, 57627), (84, 57651), (85, 57660), (93, 57693), (94, 57696), (96, 57720), (100, 57750), (108, 57807), (115, 57846), (122, 57891),

Gene: Heath_67 Start: 59282, Stop: 59869, Start Num: 49

Candidate Starts for Heath_67:

(28, 59147), (29, 59156), (31, 59168), (Start: 49 @59282 has 31 MA's), (61, 59312), (66, 59348), (67, 59351), (72, 59387), (79, 59438), (85, 59477), (86, 59480), (95, 59534), (96, 59537), (112, 59636), (113, 59645), (122, 59708), (134, 59810),

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

Candidate Starts for Heathcliff_71:

(Start: 52 @57876 has 53 MA's), (57, 57885), (58, 57891), (67, 57945), (81, 58038), (84, 58062), (85, 58071), (93, 58104), (94, 58107), (96, 58131), (100, 58161), (108, 58218), (115, 58257),

Gene: Hedgerow_66 Start: 56165, Stop: 56818, Start Num: 44

Candidate Starts for Hedgerow_66:

(9, 55835), (13, 55874), (36, 56105), (Start: 44 @56165 has 34 MA's), (Start: 46 @56171 has 3 MA's), (62, 56219), (65, 56246), (71, 56276), (78, 56336), (83, 56360), (90, 56402), (92, 56408), (93, 56414), (95, 56438), (108, 56528), (126, 56684),

Gene: Holeinone_66 Start: 56073, Stop: 56723, Start Num: 44

Candidate Starts for Holeinone_66:

(6, 55719), (9, 55743), (13, 55782), (36, 56013), (Start: 44 @56073 has 34 MA's), (Start: 46 @56079 has 3 MA's), (62, 56124), (65, 56151), (71, 56181), (78, 56241), (83, 56265), (90, 56307), (92, 56313), (93, 56319), (95, 56343), (108, 56433), (126, 56589),

Gene: Hosp_064 Start: 55830, Stop: 56528, Start Num: 49

Candidate Starts for Hosp_064:

(Start: 49 @55830 has 31 MA's), (61, 55860), (66, 55896), (67, 55899), (75, 55959), (78, 55980), (85, 56025), (86, 56028), (95, 56082), (96, 56085), (97, 56109), (108, 56172), (135, 56370),

Gene: Hydro_68 Start: 59593, Stop: 60180, Start Num: 49

Candidate Starts for Hydro_68:

(28, 59458), (29, 59467), (31, 59479), (Start: 49 @59593 has 31 MA's), (61, 59623), (66, 59659), (67, 59662), (72, 59698), (79, 59749), (85, 59788), (86, 59791), (95, 59845), (96, 59848), (101, 59881), (103, 59890), (112, 59947), (113, 59956), (122, 60019), (134, 60121),

Gene: ItsyBitsy1_65 Start: 56303, Stop: 56956, Start Num: 44

Candidate Starts for ItsyBitsy1_65:

(36, 56243), (Start: 44 @56303 has 34 MA's), (Start: 46 @56309 has 3 MA's), (62, 56357), (65, 56384), (71, 56414), (78, 56474), (83, 56498), (90, 56540), (92, 56546), (93, 56552), (95, 56576), (108, 56666), (126, 56822),

Gene: JAMaL_67 Start: 59483, Stop: 60070, Start Num: 49

Candidate Starts for JAMaL_67:

(4, 59078), (7, 59111), (16, 59204), (18, 59222), (21, 59252), (28, 59348), (29, 59357), (Start: 49 @59483 has 31 MA's), (66, 59549), (67, 59552), (72, 59588), (79, 59639), (85, 59678), (86, 59681), (95, 59735), (96, 59738), (113, 59846), (119, 59894), (122, 59909), (134, 60011),

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

Candidate Starts for Jackstina_67:

(Start: 52 @57801 has 53 MA's), (58, 57816), (63, 57846), (67, 57870), (81, 57963), (84, 57987), (85, 57996), (93, 58029), (94, 58032), (96, 58056), (100, 58086), (108, 58143),

Gene: JaguarMi_68 Start: 60746, Stop: 61336, Start Num: 49

Candidate Starts for JaguarMi_68:

(28, 60611), (29, 60620), (Start: 49 @60746 has 31 MA's), (61, 60776), (66, 60812), (67, 60815), (72, 60851), (73, 60863), (79, 60902), (85, 60941), (86, 60944), (95, 60998), (96, 61001), (112, 61100), (113, 61109), (122, 61172), (134, 61274),

Gene: JellyBelly_59 Start: 49907, Stop: 50524, Start Num: 43

Candidate Starts for JellyBelly_59:

(2, 49508), (14, 49631), (15, 49643), (23, 49718), (38, 49862), (Start: 43 @49907 has 10 MA's), (48, 49922), (56, 49937), (59, 49949), (65, 49985), (75, 50054), (78, 50075), (81, 50087), (82, 50096), (85, 50120), (90, 50141), (99, 50207), (112, 50279), (113, 50288), (119, 50336), (122, 50351),

Gene: Jolie1_066 Start: 57958, Stop: 58656, Start Num: 49

Candidate Starts for Jolie1_066:

(Start: 49 @57958 has 31 MA's), (61, 57988), (66, 58024), (67, 58027), (75, 58087), (78, 58108), (85, 58153), (86, 58156), (95, 58210), (96, 58213), (97, 58237), (108, 58300), (135, 58498),

Gene: JoyceMaria_68 Start: 59619, Stop: 60206, Start Num: 49

Candidate Starts for JoyceMaria_68:

(Start: 49 @59619 has 31 MA's), (61, 59649), (66, 59685), (67, 59688), (72, 59724), (79, 59775), (85, 59814), (86, 59817), (95, 59871), (96, 59874), (101, 59907), (103, 59916), (105, 59937), (113, 59982), (122, 60045),

Gene: Kaleb_66 Start: 56220, Stop: 56873, Start Num: 44

Candidate Starts for Kaleb_66:

(6, 55866), (9, 55890), (13, 55929), (36, 56160), (Start: 44 @56220 has 34 MA's), (Start: 46 @56226 has 3 MA's), (62, 56274), (65, 56301), (71, 56331), (78, 56391), (83, 56415), (90, 56457), (92, 56463), (93, 56469), (95, 56493), (108, 56583), (126, 56739), (137, 56808),

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

Candidate Starts for Kamiyu_71:

(Start: 52 @57878 has 53 MA's), (57, 57887), (58, 57893), (63, 57923), (67, 57947), (81, 58040), (84, 58064), (85, 58073), (93, 58106), (94, 58109), (96, 58133), (100, 58163), (108, 58220), (115, 58259),

Gene: KayaCho_66 Start: 57943, Stop: 58623, Start Num: 49

Candidate Starts for KayaCho_66:

(Start: 49 @57943 has 31 MA's), (61, 57973), (66, 58009), (67, 58012), (74, 58066), (78, 58093), (86, 58141), (95, 58195), (96, 58198), (97, 58222), (98, 58225), (108, 58285), (129, 58435), (135, 58468),

Gene: Kheth_66 Start: 56132, Stop: 56785, Start Num: 44

Candidate Starts for Kheth_66:

(6, 55778), (9, 55802), (13, 55841), (36, 56072), (Start: 44 @56132 has 34 MA's), (Start: 46 @56138 has 3 MA's), (62, 56186), (65, 56213), (71, 56243), (78, 56303), (83, 56327), (90, 56369), (92, 56375), (93, 56381), (95, 56405), (108, 56495), (126, 56651),

Gene: Kolhan_67 Start: 56109, Stop: 56762, Start Num: 44

Candidate Starts for Kolhan_67:

(36, 56049), (Start: 44 @56109 has 34 MA's), (Start: 46 @56115 has 3 MA's), (62, 56163), (65, 56190), (71, 56220), (78, 56280), (83, 56304), (90, 56346), (92, 56352), (93, 56358), (95, 56382), (108, 56472), (126, 56628),

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

Candidate Starts for Kronus_71:

(Start: 52 @58974 has 53 MA's), (57, 58983), (58, 58989), (63, 59019), (67, 59043), (81, 59136), (84, 59160), (85, 59169), (93, 59202), (94, 59205), (96, 59229), (100, 59259), (108, 59316),

Gene: Lambano_65 Start: 58489, Stop: 59076, Start Num: 49

Candidate Starts for Lambano_65:

(4, 58084), (8, 58126), (16, 58210), (18, 58228), (21, 58258), (28, 58354), (29, 58363), (Start: 49 @58489 has 31 MA's), (66, 58555), (67, 58558), (72, 58594), (79, 58645), (85, 58684), (86, 58687), (95, 58741), (96, 58744), (113, 58852), (122, 58915), (134, 59017),

Gene: Lars_67 Start: 56193, Stop: 56846, Start Num: 44

Candidate Starts for Lars_67:

(6, 55839), (9, 55863), (13, 55902), (36, 56133), (Start: 44 @56193 has 34 MA's), (Start: 46 @56199 has 3 MA's), (62, 56247), (65, 56274), (71, 56304), (78, 56364), (83, 56388), (90, 56430), (92, 56436), (93, 56442), (95, 56466), (108, 56556), (126, 56712),

Gene: Laurie_66 Start: 55873, Stop: 56523, Start Num: 44

Candidate Starts for Laurie_66:

(36, 55813), (Start: 44 @55873 has 34 MA's), (Start: 46 @55879 has 3 MA's), (62, 55924), (65, 55951), (71, 55981), (76, 56026), (78, 56041), (83, 56065), (90, 56107), (92, 56113), (93, 56119), (95, 56143), (108, 56233), (126, 56389),

Gene: Lephleur_66 Start: 56058, Stop: 56708, Start Num: 44

Candidate Starts for Lephleur_66:

(6, 55704), (9, 55728), (13, 55767), (36, 55998), (Start: 44 @56058 has 34 MA's), (Start: 46 @56064 has 3 MA's), (62, 56109), (65, 56136), (71, 56166), (78, 56226), (83, 56250), (90, 56292), (92, 56298), (93, 56304), (95, 56328), (108, 56418), (126, 56574),

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

Candidate Starts for LestyG_69:

(Start: 52 @57404 has 53 MA's), (58, 57419), (63, 57449), (67, 57473), (81, 57566), (84, 57590), (85, 57599), (93, 57632), (94, 57635), (96, 57659), (100, 57689), (108, 57746), (115, 57785), (122, 57830),

Gene: Ligma_64 Start: 51329, Stop: 51919, Start Num: 43

Candidate Starts for Ligma_64:

(Start: 43 @51329 has 10 MA's), (48, 51338), (65, 51401), (74, 51464), (78, 51491), (81, 51503), (82, 51512), (85, 51536), (99, 51623), (112, 51695), (113, 51704), (119, 51752), (122, 51767),

Gene: LilSmirk_66 Start: 56091, Stop: 56744, Start Num: 44

Candidate Starts for LilSmirk_66:

(6, 55737), (9, 55761), (13, 55800), (36, 56031), (Start: 44 @56091 has 34 MA's), (Start: 46 @56097 has 3 MA's), (62, 56145), (65, 56172), (71, 56202), (78, 56262), (83, 56286), (90, 56328), (92, 56334),

(93, 56340), (95, 56364), (108, 56454), (126, 56610),

Gene: LittleDigger_66 Start: 58412, Stop: 58999, Start Num: 49

Candidate Starts for LittleDigger_66:

(4, 58007), (16, 58133), (18, 58151), (21, 58181), (28, 58277), (29, 58286), (Start: 49 @58412 has 31 MA's), (66, 58478), (67, 58481), (72, 58517), (79, 58568), (85, 58607), (86, 58610), (95, 58664), (96, 58667), (113, 58775), (122, 58838), (134, 58940),

Gene: LittleMunchkin_65 Start: 54116, Stop: 54709, Start Num: 45

Candidate Starts for LittleMunchkin_65:

(Start: 45 @54116 has 1 MA's), (65, 54185), (74, 54248), (78, 54275), (79, 54281), (82, 54296), (85, 54320), (90, 54341), (99, 54407), (108, 54467), (111, 54473), (112, 54479), (113, 54488), (119, 54536), (122, 54551),

Gene: LizLemon_66 Start: 56220, Stop: 56873, Start Num: 44

Candidate Starts for LizLemon_66:

(6, 55866), (9, 55890), (13, 55929), (36, 56160), (Start: 44 @56220 has 34 MA's), (Start: 46 @56226 has 3 MA's), (62, 56274), (65, 56301), (71, 56331), (78, 56391), (83, 56415), (90, 56457), (92, 56463), (93, 56469), (95, 56493), (108, 56583), (126, 56739),

Gene: Lolalove_69 Start: 59664, Stop: 60251, Start Num: 49

Candidate Starts for Lolalove_69:

(28, 59529), (29, 59538), (Start: 49 @59664 has 31 MA's), (61, 59694), (66, 59730), (67, 59733), (72, 59769), (79, 59820), (85, 59859), (86, 59862), (95, 59916), (96, 59919), (101, 59952), (103, 59961), (112, 60018), (113, 60027), (122, 60090), (134, 60192),

Gene: Magpie_65 Start: 59349, Stop: 59936, Start Num: 49

Candidate Starts for Magpie_65:

(Start: 49 @59349 has 31 MA's), (66, 59415), (67, 59418), (72, 59454), (79, 59505), (85, 59544), (86, 59547), (95, 59601), (96, 59604), (103, 59646), (113, 59712), (122, 59775), (134, 59877),

Gene: MakoManhole_62 Start: 51487, Stop: 52053, Start Num: 47

Candidate Starts for MakoManhole_62:

(3, 51094), (30, 51376), (31, 51385), (Start: 47 @51487 has 10 MA's), (65, 51556), (75, 51625), (78, 51646), (79, 51652), (82, 51667), (85, 51691), (90, 51712), (99, 51778), (100, 51781), (102, 51790), (108, 51838), (111, 51844), (113, 51859), (122, 51922),

Gene: Mariokart_60 Start: 50195, Stop: 50812, Start Num: 43

Candidate Starts for Mariokart_60:

(2, 49796), (14, 49919), (15, 49931), (23, 50006), (38, 50150), (Start: 43 @50195 has 10 MA's), (48, 50210), (56, 50225), (59, 50237), (65, 50273), (75, 50342), (78, 50363), (82, 50384), (85, 50408), (90, 50429), (99, 50495), (112, 50567), (113, 50576), (119, 50624), (122, 50639),

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

Candidate Starts for Marley1013_72:

(Start: 52 @58826 has 53 MA's), (57, 58835), (58, 58841), (63, 58871), (67, 58895), (81, 58988), (84, 59012), (85, 59021), (93, 59054), (94, 59057), (96, 59081), (100, 59111), (108, 59168),

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

Candidate Starts for Marlia_72:

(Start: 52 @58347 has 53 MA's), (57, 58356), (58, 58362), (63, 58392), (67, 58416), (81, 58509), (84, 58533), (85, 58542), (93, 58575), (94, 58578), (96, 58602), (100, 58632), (108, 58689), (115, 58728), (122, 58773),

Gene: MasterPo_67 Start: 56090, Stop: 56740, Start Num: 44

Candidate Starts for MasterPo_67:

(6, 55736), (9, 55760), (13, 55799), (36, 56030), (Start: 44 @56090 has 34 MA's), (Start: 46 @56096 has 3 MA's), (62, 56141), (65, 56168), (71, 56198), (78, 56258), (83, 56282), (90, 56324), (92, 56330), (93, 56336), (95, 56360), (108, 56450), (126, 56606),

Gene: Minnow_69 Start: 58200, Stop: 58880, Start Num: 49

Candidate Starts for Minnow_69:

(Start: 49 @58200 has 31 MA's), (61, 58230), (66, 58266), (67, 58269), (74, 58323), (78, 58350), (86, 58398), (95, 58452), (96, 58455), (97, 58479), (98, 58482), (108, 58542), (129, 58692), (135, 58725),

Gene: Mithril_67 Start: 59663, Stop: 60250, Start Num: 49

Candidate Starts for Mithril_67:

(Start: 49 @59663 has 31 MA's), (61, 59693), (66, 59729), (67, 59732), (72, 59768), (79, 59819), (85, 59858), (86, 59861), (95, 59915), (96, 59918), (101, 59951), (103, 59960), (112, 60017), (113, 60026), (122, 60089), (134, 60191),

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

Candidate Starts for MmasiCarm_72:

(Start: 52 @58329 has 53 MA's), (58, 58344), (67, 58398), (81, 58491), (84, 58515), (85, 58524), (93, 58557), (94, 58560), (96, 58584), (100, 58614), (108, 58671),

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

Candidate Starts for Mortcellus_71:

(Start: 52 @58991 has 53 MA's), (58, 59006), (63, 59036), (67, 59060), (81, 59153), (84, 59177), (85, 59186), (93, 59219), (94, 59222), (96, 59246), (100, 59276), (108, 59333),

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

Candidate Starts for Morty007_70:

(Start: 52 @58826 has 53 MA's), (57, 58835), (58, 58841), (63, 58871), (67, 58895), (81, 58988), (84, 59012), (85, 59021), (93, 59054), (94, 59057), (96, 59081), (100, 59111), (108, 59168),

Gene: MossRose_65 Start: 52447, Stop: 53013, Start Num: 47

Candidate Starts for MossRose_65:

(3, 52054), (30, 52336), (31, 52345), (Start: 47 @52447 has 10 MA's), (65, 52516), (75, 52585), (78, 52606), (79, 52612), (82, 52627), (85, 52651), (90, 52672), (99, 52738), (100, 52741), (102, 52750), (108, 52798), (111, 52804), (113, 52819), (122, 52882),

Gene: Mudslide_67 Start: 59684, Stop: 60271, Start Num: 49

Candidate Starts for Mudslide_67:

(28, 59549), (29, 59558), (Start: 49 @59684 has 31 MA's), (66, 59750), (67, 59753), (72, 59789), (79, 59840), (85, 59879), (86, 59882), (95, 59936), (96, 59939), (103, 59981), (112, 60038), (113, 60047), (122, 60110),

Gene: Mulaychimus_72 Start: 58346, Stop: 58945, Start Num: 52

Candidate Starts for Mulaychimus_72:

(Start: 52 @58346 has 53 MA's), (57, 58355), (58, 58361), (63, 58391), (67, 58415), (81, 58508), (84, 58532), (85, 58541), (93, 58574), (94, 58577), (96, 58601), (100, 58631), (108, 58688), (115, 58727), (122, 58772),

Gene: Mysterious_69 Start: 59187, Stop: 59828, Start Num: 49

Candidate Starts for Mysterious_69:

(Start: 49 @59187 has 31 MA's), (63, 59232), (74, 59310), (78, 59337), (87, 59391), (88, 59397), (93, 59415), (95, 59439), (96, 59442), (98, 59469), (103, 59484), (107, 59523), (109, 59532), (113, 59550), (115, 59568), (125, 59658),

Gene: NHagos_62 Start: 50884, Stop: 51486, Start Num: 40

Candidate Starts for NHagos_62:

(12, 50605), (23, 50707), (Start: 40 @50884 has 1 MA's), (60, 50944), (63, 50962), (69, 50992), (75, 51046), (78, 51067), (81, 51079), (82, 51088), (85, 51112), (90, 51133), (91, 51136), (100, 51202), (102, 51211), (113, 51280), (117, 51310), (121, 51334), (131, 51421),

Gene: Nanao_66 Start: 58479, Stop: 59066, Start Num: 49

Candidate Starts for Nanao_66:

(4, 58074), (8, 58116), (16, 58200), (18, 58218), (21, 58248), (28, 58344), (29, 58353), (Start: 49 @58479 has 31 MA's), (66, 58545), (67, 58548), (72, 58584), (79, 58635), (85, 58674), (86, 58677), (95, 58731), (96, 58734), (113, 58842), (122, 58905), (134, 59007),

Gene: Nehemiah_69 Start: 59025, Stop: 59666, Start Num: 49

Candidate Starts for Nehemiah_69:

(Start: 49 @59025 has 31 MA's), (63, 59070), (74, 59148), (77, 59163), (78, 59175), (87, 59229), (88, 59235), (93, 59253), (95, 59277), (96, 59280), (98, 59307), (103, 59322), (107, 59361), (109, 59370), (113, 59388), (115, 59406), (125, 59496), (136, 59562),

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

Candidate Starts for Neos5_71:

(Start: 52 @58288 has 53 MA's), (57, 58297), (58, 58303), (67, 58357), (81, 58450), (84, 58474), (85, 58483), (93, 58516), (94, 58519), (96, 58543), (100, 58573), (108, 58630),

Gene: Nigel_65 Start: 58299, Stop: 58883, Start Num: 49

Candidate Starts for Nigel_65:

(Start: 49 @58299 has 31 MA's), (53, 58305), (61, 58329), (66, 58365), (67, 58368), (73, 58416), (79, 58455), (85, 58494), (86, 58497), (95, 58551), (96, 58554), (113, 58662), (122, 58725),

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

Candidate Starts for Nozo_71:

(Start: 52 @58685 has 53 MA's), (58, 58700), (63, 58730), (67, 58754), (81, 58847), (84, 58871), (85, 58880), (93, 58913), (94, 58916), (96, 58940), (100, 58970), (108, 59027), (122, 59111),

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

Candidate Starts for Obutu_73:

(Start: 52 @58508 has 53 MA's), (58, 58523), (63, 58553), (67, 58577), (81, 58670), (84, 58694), (85, 58703), (93, 58736), (94, 58739), (96, 58763), (100, 58793), (108, 58850), (115, 58889),

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

Candidate Starts for Olivio_71:

(Start: 52 @58141 has 53 MA's), (57, 58150), (58, 58156), (67, 58210), (81, 58303), (84, 58327), (85, 58336), (93, 58369), (94, 58372), (96, 58396), (100, 58426), (108, 58483), (115, 58522),

Gene: Opia_67 Start: 56110, Stop: 56766, Start Num: 44

Candidate Starts for Opia_67:

(6, 55756), (9, 55780), (13, 55819), (36, 56050), (Start: 44 @56110 has 34 MA's), (Start: 46 @56116 has 3 MA's), (62, 56167), (65, 56194), (71, 56224), (78, 56284), (83, 56308), (90, 56350), (92, 56356), (93, 56362), (95, 56386), (108, 56476), (126, 56632),

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

Candidate Starts for OrangeOswald_71:

(Start: 52 @57926 has 53 MA's), (58, 57941), (63, 57971), (67, 57995), (81, 58088), (84, 58112), (85, 58121), (93, 58154), (94, 58157), (96, 58181), (100, 58211), (108, 58268), (122, 58352),

Gene: Phaedruss_66 Start: 57351, Stop: 57950, Start Num: 52

Candidate Starts for Phaedruss_66:

(Start: 52 @57351 has 53 MA's), (57, 57360), (58, 57366), (63, 57396), (67, 57420), (81, 57513), (84, 57537), (85, 57546), (93, 57579), (94, 57582), (96, 57606), (100, 57636), (108, 57693), (115, 57732),

Gene: Phantasmagoria_65 Start: 56102, Stop: 56755, Start Num: 44

Candidate Starts for Phantasmagoria_65:

(6, 55748), (9, 55772), (13, 55811), (36, 56042), (Start: 44 @56102 has 34 MA's), (Start: 46 @56108 has 3 MA's), (62, 56156), (65, 56183), (71, 56213), (78, 56273), (83, 56297), (90, 56339), (92, 56345), (93, 56351), (95, 56375), (108, 56465), (126, 56621),

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

Candidate Starts for Phayeta_74:

(Start: 52 @58412 has 53 MA's), (58, 58427), (63, 58457), (67, 58481), (81, 58574), (84, 58598), (85, 58607), (93, 58640), (94, 58643), (96, 58667), (100, 58697), (108, 58754),

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

Candidate Starts for Philly_70:

(Start: 52 @57738 has 53 MA's), (57, 57747), (58, 57753), (63, 57783), (67, 57807), (81, 57900), (84, 57924), (85, 57933), (93, 57966), (94, 57969), (96, 57993), (100, 58023), (108, 58080), (115, 58119),

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

Candidate Starts for Phlyer_71:

(Start: 52 @58634 has 53 MA's), (57, 58643), (58, 58649), (63, 58679), (67, 58703), (81, 58796), (84, 58820), (85, 58829), (93, 58862), (94, 58865), (96, 58889), (100, 58919), (108, 58976),

Gene: Pine5_63 Start: 49969, Stop: 50628, Start Num: 48

Candidate Starts for Pine5_63:

(48, 49969), (59, 50002), (77, 50116), (88, 50188), (110, 50338), (124, 50449), (138, 50578), (139, 50581), (140, 50587),

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

Candidate Starts for Pipefish_74:

(Start: 52 @59045 has 53 MA's), (58, 59060), (63, 59090), (67, 59114), (81, 59207), (84, 59231), (85, 59240), (93, 59273), (94, 59276), (96, 59300), (100, 59330), (108, 59387), (115, 59426), (122, 59471),

Gene: Poster_65 Start: 58480, Stop: 59067, Start Num: 49

Candidate Starts for Poster_65:

(4, 58075), (8, 58117), (16, 58201), (18, 58219), (21, 58249), (28, 58345), (29, 58354), (Start: 49 @58480 has 31 MA's), (66, 58546), (67, 58549), (72, 58585), (79, 58636), (85, 58675), (86, 58678), (95, 58732), (96, 58735), (113, 58843), (122, 58906), (134, 59008),

Gene: Prince_66 Start: 59594, Stop: 60181, Start Num: 49

Candidate Starts for Prince_66:

(28, 59459), (29, 59468), (Start: 49 @59594 has 31 MA's), (61, 59624), (66, 59660), (67, 59663), (72, 59699), (79, 59750), (85, 59789), (86, 59792), (95, 59846), (96, 59849), (101, 59882), (103, 59891), (113, 59957), (122, 60020),

Gene: PrinceCharming_67 Start: 56142, Stop: 56795, Start Num: 44

Candidate Starts for PrinceCharming_67:

(6, 55791), (9, 55815), (13, 55854), (36, 56082), (Start: 44 @56142 has 34 MA's), (Start: 46 @56148 has 3 MA's), (62, 56196), (65, 56223), (71, 56253), (78, 56313), (83, 56337), (90, 56379), (92, 56385), (93, 56391), (95, 56415), (108, 56505), (126, 56661),

Gene: QueenPie_62 Start: 58582, Stop: 59169, Start Num: 49

Candidate Starts for QueenPie_62:

(Start: 49 @58582 has 31 MA's), (61, 58612), (66, 58648), (67, 58651), (72, 58687), (79, 58738), (80, 58741), (85, 58777), (86, 58780), (95, 58834), (96, 58837), (113, 58945), (119, 58993), (122, 59008), (134, 59110),

Gene: Qyrzula_60 Start: 56221, Stop: 56880, Start Num: 44

Candidate Starts for Qyrzula_60:

(6, 55867), (9, 55891), (13, 55930), (36, 56161), (Start: 44 @56221 has 34 MA's), (Start: 46 @56227 has 3 MA's), (62, 56281), (65, 56308), (71, 56338), (78, 56398), (83, 56422), (90, 56464), (92, 56470), (93, 56476), (95, 56500), (108, 56590), (126, 56746),

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

Candidate Starts for RagingRooster_70:

(Start: 52 @57566 has 53 MA's), (57, 57575), (58, 57581), (63, 57611), (67, 57635), (81, 57728), (84, 57752), (85, 57761), (93, 57794), (94, 57797), (96, 57821), (100, 57851), (108, 57908),

Gene: RawrgerThat_68 Start: 59487, Stop: 60074, Start Num: 49

Candidate Starts for RawrgerThat_68:

(Start: 49 @59487 has 31 MA's), (61, 59517), (66, 59553), (67, 59556), (72, 59592), (79, 59643), (85, 59682), (86, 59685), (95, 59739), (96, 59742), (103, 59784), (113, 59850), (122, 59913), (134, 60015),

Gene: Renkei_66 Start: 58406, Stop: 58993, Start Num: 49

Candidate Starts for Renkei_66:

(4, 58001), (16, 58127), (18, 58145), (21, 58175), (28, 58271), (29, 58280), (Start: 49 @58406 has 31 MA's), (66, 58472), (67, 58475), (72, 58511), (79, 58562), (85, 58601), (86, 58604), (95, 58658), (96, 58661), (113, 58769), (122, 58832), (134, 58934),

Gene: Rhinoforte_66 Start: 56143, Stop: 56793, Start Num: 44

Candidate Starts for Rhinoforte_66:

(6, 55789), (9, 55813), (13, 55852), (36, 56083), (Start: 44 @56143 has 34 MA's), (Start: 46 @56149 has 3 MA's), (62, 56194), (65, 56221), (71, 56251), (78, 56311), (83, 56335), (90, 56377), (92, 56383), (93, 56389), (95, 56413), (108, 56503), (126, 56659),

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

Candidate Starts for Rita1961_72:

(Start: 52 @58284 has 53 MA's), (58, 58299), (67, 58353), (81, 58446), (84, 58470), (85, 58479), (93, 58512), (94, 58515), (96, 58539), (100, 58569), (108, 58626),

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

Candidate Starts for RomaT_71:

(Start: 52 @58485 has 53 MA's), (57, 58494), (58, 58500), (63, 58530), (67, 58554), (81, 58647), (84, 58671), (85, 58680), (93, 58713), (94, 58716), (96, 58740), (100, 58770), (108, 58827), (115, 58866), (122, 58911),

Gene: Rosebush_65 Start: 56206, Stop: 56859, Start Num: 44

Candidate Starts for Rosebush_65:

(6, 55852), (9, 55876), (13, 55915), (36, 56146), (Start: 44 @56206 has 34 MA's), (Start: 46 @56212 has 3 MA's), (62, 56260), (65, 56287), (71, 56317), (78, 56377), (83, 56401), (90, 56443), (92, 56449), (93, 56455), (95, 56479), (108, 56569), (126, 56725),

Gene: Sabella_66 Start: 56042, Stop: 56695, Start Num: 44

Candidate Starts for Sabella_66:

(36, 55982), (Start: 44 @56042 has 34 MA's), (Start: 46 @56048 has 3 MA's), (62, 56096), (65, 56123), (71, 56153), (78, 56213), (83, 56237), (90, 56279), (92, 56285), (93, 56291), (95, 56315), (108, 56405), (126, 56561),

Gene: Shatter_64 Start: 51329, Stop: 51919, Start Num: 43

Candidate Starts for Shatter_64:

(Start: 43 @51329 has 10 MA's), (48, 51338), (65, 51401), (74, 51464), (78, 51491), (81, 51503), (82, 51512), (85, 51536), (99, 51623), (112, 51695), (113, 51704), (119, 51752), (122, 51767),

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

Candidate Starts for Shenandoah_70:

(Start: 52 @57543 has 53 MA's), (57, 57552), (58, 57558), (63, 57588), (67, 57612), (81, 57705), (84, 57729), (85, 57738), (93, 57771), (94, 57774), (96, 57798), (100, 57828), (108, 57885),

Gene: Sisko_62 Start: 51559, Stop: 52155, Start Num: 43

Candidate Starts for Sisko_62:

(Start: 43 @51559 has 10 MA's), (65, 51637), (73, 51694), (75, 51706), (78, 51727), (85, 51772), (90, 51793), (99, 51859), (113, 51940), (119, 51988), (122, 52003),

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

Candidate Starts for SlippinJimmy_74:

(Start: 52 @59309 has 53 MA's), (57, 59318), (58, 59324), (63, 59354), (67, 59378), (81, 59471), (84, 59495), (85, 59504), (93, 59537), (94, 59540), (96, 59564), (100, 59594), (108, 59651), (115, 59690), (122, 59735),

Gene: Sour_64 Start: 53787, Stop: 54392, Start Num: 39

Candidate Starts for Sour_64:

(Start: 39 @53787 has 1 MA's), (65, 53883), (73, 53940), (75, 53952), (85, 54018), (90, 54039), (99, 54105), (108, 54165), (111, 54171), (112, 54177), (113, 54186), (119, 54234), (122, 54249),

Gene: StAugustine_92 Start: 69363, Stop: 69944, Start Num: 47

Candidate Starts for StAugustine_92:

(Start: 47 @69363 has 10 MA's), (65, 69432), (69, 69447), (81, 69534), (82, 69543), (84, 69558), (85, 69567), (96, 69627), (108, 69726), (141, 69939),

Gene: Stinger_67 Start: 58422, Stop: 59009, Start Num: 49

Candidate Starts for Stinger_67:

(4, 58029), (16, 58155), (19, 58185), (29, 58296), (Start: 49 @58422 has 31 MA's), (53, 58428), (61, 58452), (66, 58488), (67, 58491), (73, 58539), (79, 58578), (80, 58581), (85, 58617), (86, 58620), (95, 58674), (96, 58677), (113, 58785), (122, 58848), (134, 58950),

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

Candidate Starts for SwainyDoc_72:

(Start: 52 @58307 has 53 MA's), (57, 58316), (58, 58322), (63, 58352), (67, 58376), (81, 58469), (84, 58493), (85, 58502), (93, 58535), (94, 58538), (96, 58562), (100, 58592), (108, 58649), (115, 58688), (122, 58733),

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

Candidate Starts for SynergyX_71:

(Start: 52 @57923 has 53 MA's), (57, 57932), (58, 57938), (63, 57968), (67, 57992), (81, 58085), (84, 58109), (85, 58118), (93, 58151), (94, 58154), (96, 58178), (100, 58208), (108, 58265), (122, 58349),

Gene: TA17A_68 Start: 56048, Stop: 56698, Start Num: 44

Candidate Starts for TA17A_68:

(36, 55988), (Start: 44 @56048 has 34 MA's), (Start: 46 @56054 has 3 MA's), (62, 56099), (65, 56126), (71, 56156), (76, 56201), (78, 56216), (83, 56240), (90, 56282), (92, 56288), (93, 56294), (95, 56318), (108, 56408), (126, 56564),

Gene: TPA2_72 Start: 57781, Stop: 58404, Start Num: 35

Candidate Starts for TPA2_72:

(19, 57622), (24, 57667), (28, 57736), (35, 57781), (51, 57871), (64, 57916), (68, 57940), (70, 57952), (78, 58021), (80, 58030), (81, 58033), (88, 58081), (89, 58084), (98, 58153), (100, 58156), (101, 58159), (108, 58213), (114, 58246), (115, 58255), (117, 58267), (127, 58366), (130, 58375),

Gene: Tinciduntolum_67 Start: 56209, Stop: 56862, Start Num: 44

Candidate Starts for Tinciduntolum_67:

(6, 55855), (9, 55879), (13, 55918), (36, 56149), (Start: 44 @56209 has 34 MA's), (Start: 46 @56215 has 3 MA's), (62, 56263), (65, 56290), (71, 56320), (78, 56380), (83, 56404), (90, 56446), (92, 56452), (93, 56458), (95, 56482), (108, 56572), (126, 56728),

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

Candidate Starts for TinyTerror_72:

(Start: 52 @58345 has 53 MA's), (58, 58360), (67, 58414), (81, 58507), (84, 58531), (85, 58540), (93, 58573), (94, 58576), (96, 58600), (100, 58630), (108, 58687),

Gene: TraderJ_65 Start: 52573, Stop: 53139, Start Num: 47

Candidate Starts for TraderJ_65:

(30, 52462), (31, 52471), (Start: 47 @52573 has 10 MA's), (65, 52642), (75, 52711), (78, 52732), (79, 52738), (82, 52753), (85, 52777), (90, 52798), (99, 52864), (100, 52867), (102, 52876), (108, 52924), (111, 52930), (113, 52945), (122, 53008),

Gene: Tres_66 Start: 56063, Stop: 56716, Start Num: 44

Candidate Starts for Tres_66:

(6, 55709), (9, 55733), (13, 55772), (36, 56003), (Start: 44 @56063 has 34 MA's), (Start: 46 @56069 has 3 MA's), (62, 56117), (65, 56144), (71, 56174), (78, 56234), (83, 56258), (90, 56300), (92, 56306), (93, 56312), (95, 56336), (108, 56426), (126, 56582),

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

Candidate Starts for Tydolla_67:

(Start: 52 @57917 has 53 MA's), (57, 57926), (63, 57959), (67, 57983), (81, 58076), (84, 58100), (85, 58109), (93, 58142), (94, 58145), (96, 58169), (100, 58199), (108, 58256), (115, 58295), (122, 58340),

Gene: Vic9_00065 Start: 56894, Stop: 57553, Start Num: 44

Candidate Starts for Vic9_00065:

(36, 56834), (Start: 44 @56894 has 34 MA's), (Start: 46 @56900 has 3 MA's), (62, 56954), (65, 56981), (71, 57011), (76, 57056), (78, 57071), (83, 57095), (90, 57137), (92, 57143), (93, 57149), (95, 57173), (108, 57263), (126, 57419),

Gene: Vincenzo_70 Start: 60825, Stop: 61445, Start Num: 41

Candidate Starts for Vincenzo_70:

(5, 60477), (16, 60576), (17, 60582), (20, 60621), (Start: 41 @60825 has 2 MA's), (67, 60921), (72, 60957), (73, 60969), (75, 60981), (85, 61047), (86, 61050), (95, 61104), (96, 61107), (100, 61137), (113, 61215), (122, 61278), (134, 61380),

Gene: VioletZ_69 Start: 59597, Stop: 60184, Start Num: 49

Candidate Starts for VioletZ_69:

(Start: 49 @59597 has 31 MA's), (61, 59627), (66, 59663), (67, 59666), (72, 59702), (79, 59753), (85, 59792), (86, 59795), (95, 59849), (96, 59852), (101, 59885), (103, 59894), (105, 59915), (113, 59960), (122, 60023),

Gene: Waleliano_67 Start: 59486, Stop: 60073, Start Num: 49

Candidate Starts for Waleliano_67:

(28, 59351), (29, 59360), (Start: 49 @59486 has 31 MA's), (61, 59516), (66, 59552), (67, 59555), (72, 59591), (79, 59642), (85, 59681), (86, 59684), (95, 59738), (96, 59741), (101, 59774), (103, 59783), (112, 59840), (113, 59849), (122, 59912), (134, 60014),

Gene: West99_66 Start: 56236, Stop: 56889, Start Num: 44

Candidate Starts for West99_66:

(6, 55882), (9, 55906), (13, 55945), (36, 56176), (Start: 44 @56236 has 34 MA's), (Start: 46 @56242 has 3 MA's), (62, 56290), (65, 56317), (71, 56347), (78, 56407), (83, 56431), (90, 56473), (92, 56479), (93, 56485), (95, 56509), (108, 56599), (126, 56755),

Gene: Wooper_66 Start: 52518, Stop: 53084, Start Num: 47

Candidate Starts for Wooper_66:

(Start: 47 @52518 has 10 MA's), (65, 52587), (75, 52656), (78, 52677), (79, 52683), (82, 52698), (85, 52722), (90, 52743), (99, 52809), (100, 52812), (102, 52821), (108, 52869), (111, 52875), (113, 52890), (122, 52953),

Gene: Xincheng_67 Start: 60697, Stop: 61287, Start Num: 49

Candidate Starts for Xincheng_67:

(28, 60562), (29, 60571), (Start: 49 @60697 has 31 MA's), (61, 60727), (66, 60763), (67, 60766), (72, 60802), (73, 60814), (79, 60853), (85, 60892), (86, 60895), (95, 60949), (96, 60952), (112, 61051), (113, 61060), (122, 61123), (134, 61225),

Gene: Yago84_61 Start: 51044, Stop: 51640, Start Num: 43

Candidate Starts for Yago84_61:

(Start: 43 @51044 has 10 MA's), (65, 51122), (73, 51179), (75, 51191), (78, 51212), (85, 51257), (90, 51278), (96, 51317), (99, 51344), (111, 51410), (113, 51425), (119, 51473), (122, 51488),

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

Candidate Starts for Yahalom_69:

(Start: 52 @57728 has 53 MA's), (57, 57737), (58, 57743), (63, 57773), (67, 57797), (81, 57890), (84, 57914), (85, 57923), (93, 57956), (94, 57959), (96, 57983), (100, 58013), (108, 58070), (115, 58109), (122, 58154),

Gene: Yeshua_65 Start: 52495, Stop: 53061, Start Num: 47

Candidate Starts for Yeshua_65:

(Start: 47 @52495 has 10 MA's), (65, 52564), (75, 52633), (78, 52654), (79, 52660), (82, 52675), (85, 52699), (90, 52720), (99, 52786), (100, 52789), (102, 52798), (108, 52846), (111, 52852), (113, 52867), (122, 52930),

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

Candidate Starts for Yinz_71:

(Start: 52 @57793 has 53 MA's), (58, 57808), (67, 57862), (81, 57955), (84, 57979), (85, 57988), (93, 58021), (94, 58024), (96, 58048), (100, 58078), (108, 58135), (115, 58174),

Gene: Zemanar_67 Start: 59384, Stop: 59971, Start Num: 49

Candidate Starts for Zemanar_67:

(28, 59249), (29, 59258), (Start: 49 @59384 has 31 MA's), (66, 59450), (67, 59453), (72, 59489), (79, 59540), (85, 59579), (86, 59582), (95, 59636), (96, 59639), (112, 59738), (113, 59747), (122, 59810), (134, 59912),