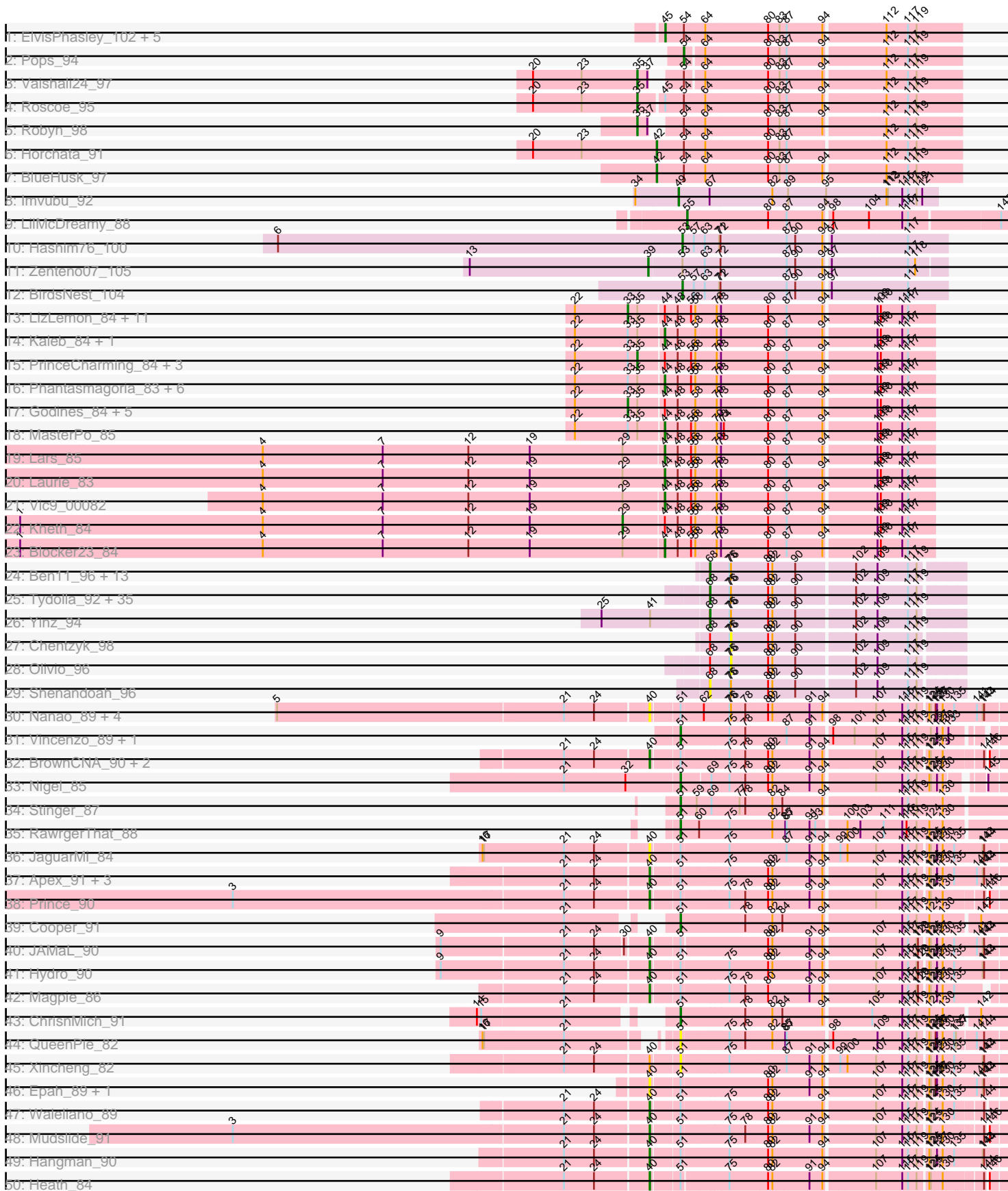
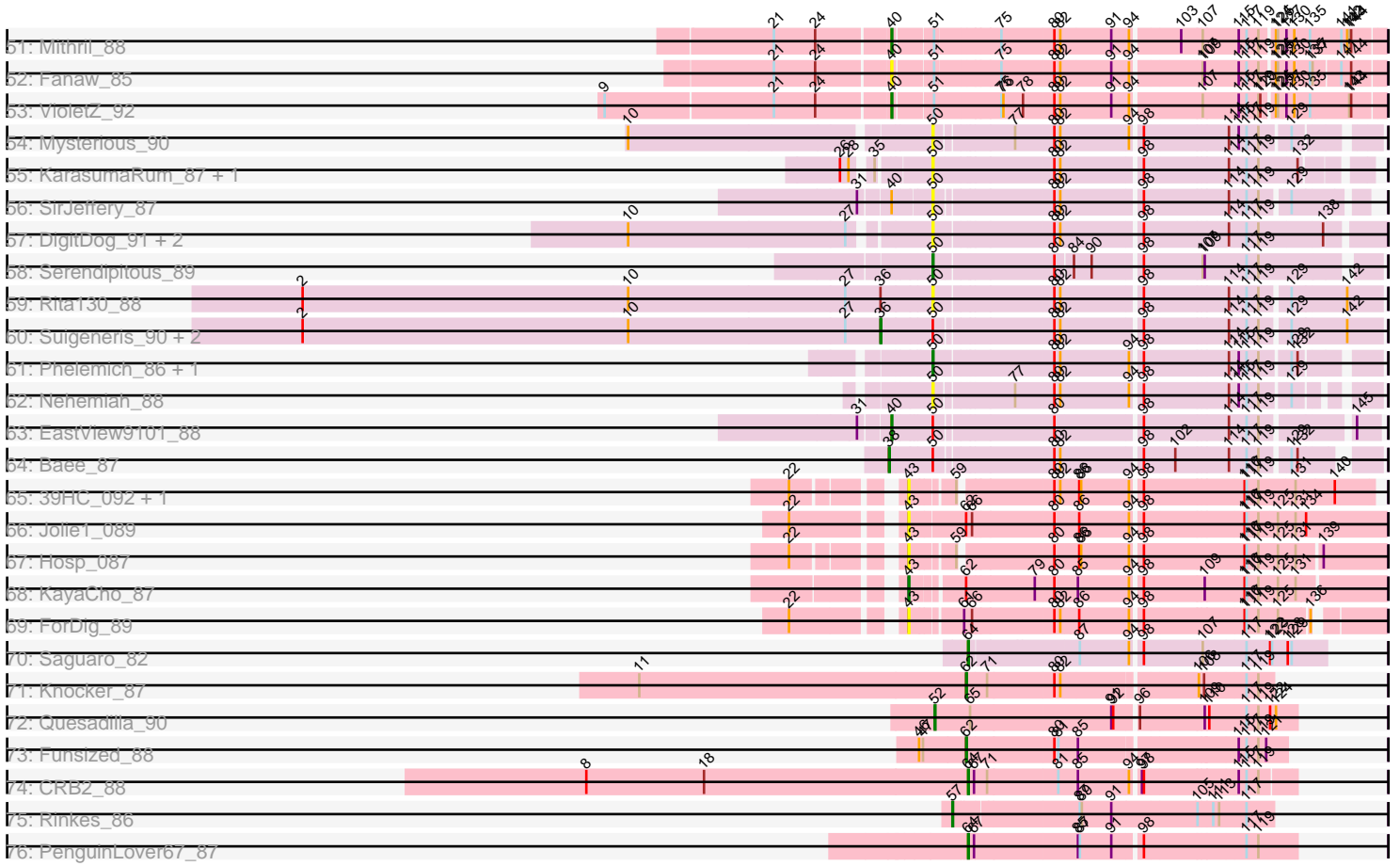


Pham 215889



Pham 215889



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 215889 Report

This analysis was run 02/22/25 on database version 588.

Pham number 215889 has 173 members, 40 are drafts.

Phages represented in each track:

- Track 1 : ElvisPhasley_102, Chunky_95, HSavage_94, Boehler_94, Vivaldi_97, Gyarad_0095
- Track 2 : Pops_94
- Track 3 : Vaishali24_97
- Track 4 : Roscoe_95
- Track 5 : Robyn_98
- Track 6 : Horchata_91
- Track 7 : BlueHusk_97
- Track 8 : Imvubu_92
- Track 9 : LilMcDreamy_88
- Track 10 : Hashim76_100
- Track 11 : Zenteno07_105
- Track 12 : BirdsNest_104
- Track 13 : LizLemon_84, Tinciduntolum_85, Sabella_84, Rhinoforte_84, Arbitr_81, Qyrzula_75, Ares_84, FrenchFry_85, Bananafish_85, Hedgerow_84, Brownie5_84, Opia_85
- Track 14 : Kaleb_84, Lephleur_84
- Track 15 : PrinceCharming_84, LilSmirk_84, West99_84, Tres_84
- Track 16 : Phantasmagoria_83, Allegro_84, Kolhan_85, Boyle_84, Calamitous_85, Faze9_83, Coffee_83
- Track 17 : Godines_84, Glass_86, Rosebush_82, ItsyBitsy1_81, TA17A_87, Holeinone_84
- Track 18 : MasterPo_85
- Track 19 : Lars_85
- Track 20 : Laurie_83
- Track 21 : Vic9_00082
- Track 22 : Kheth_84
- Track 23 : Blocker23_84
- Track 24 : Ben11_96, Marley1013_94, Chandler_96, Kronus_96, Mortcellus_96, LestyG_94, TinyTerror_97, Devonte_94, Yahalom_94, Glubnar_95, Bernardo_93, SwainyDoc_96, Casbah_96, Compostia_95
- Track 25 : Tydolla_92, Neos5_95, Gervas_97, SynergyX_97, OrangeOswald_95, Akoma_97, Philly_95, HarveySr_93, RagingRooster_96, Corofin_96, Phlyer_96, SlippinJimmy_99, Audrey_96, Jackstina_89, GlenHope_97, Rita1961_97, Baloo_95, Briakila_97, Phayeta_98, Deenasa_97, Chalmers_96, Heathcliff_96, Abinghost_96, Morty007_94, Nozo_96, Obutu_98, MmasiCarm_97, RomaT_96, Daisy_95, Phaedrus_91, Kamiyu_96, Halfpint_95, Pipefish_95, Marlia_96, ChaChing_96,

Athena_98

- Track 26 : Yinz_94
- Track 27 : Chentzyk_98
- Track 28 : Olivio_96
- Track 29 : Shenandoah_96
- Track 30 : Nanao_89, Lambano_87, Poster_88, GinPorsche_89, Hally898_87
- Track 31 : Vincenzo_89, AlanGrant_90
- Track 32 : BrownCNA_90, Austelle_90, Lolalove_92
- Track 33 : Nigel_85
- Track 34 : Stinger_87
- Track 35 : RawrgerThat_88
- Track 36 : JaguarMi_84
- Track 37 : Apex_91, BobbyK_90, Frederick_91, Zemanar_88
- Track 38 : Prince_90
- Track 39 : Cooper_91
- Track 40 : JAMaL_90
- Track 41 : Hydro_90
- Track 42 : Magpie_86
- Track 43 : ChrisnMich_91
- Track 44 : QueenPie_82
- Track 45 : Xincheng_82
- Track 46 : Epah_89, Antihero_89
- Track 47 : Waleliano_89
- Track 48 : Mudslide_91
- Track 49 : Hangman_90
- Track 50 : Heath_84
- Track 51 : Mithril_88
- Track 52 : Fanaw_85
- Track 53 : VioletZ_92
- Track 54 : Mysterious_90
- Track 55 : KarasumaRum_87, StinkyVeggy_87
- Track 56 : SirJeffery_87
- Track 57 : DigitDog_91, Shenyu_90, Nangang_90
- Track 58 : Serendipitous_89
- Track 59 : Rita130_88
- Track 60 : Suigeneris_90, Donny_89, Acadian_89
- Track 61 : Phelemich_86, Reprobate_88
- Track 62 : Nehemiah_88
- Track 63 : EastView9101_88
- Track 64 : Bae_87
- Track 65 : 39HC_092, 40BC_092
- Track 66 : Jolie1_089
- Track 67 : Hosp_087
- Track 68 : KayaCho_87
- Track 69 : ForDig_89
- Track 70 : Saguaro_82
- Track 71 : Knocker_87
- Track 72 : Quesadilla_90
- Track 73 : Funsized_88
- Track 74 : CRB2_88
- Track 75 : Rinkes_86
- Track 76 : PenguinLover67_87

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

The start number called the most often in the published annotations is 68, it was called in 44 of the 133 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Abinghost_96, Akoma_97, Athena_98, Audrey_96, Baloo_95, Ben11_96, Bernardo_93, Briakila_97, Casbah_96, ChaChing_96, Chalmers_96, Chandler_96, Compostia_95, Corofin_96, Daisy_95, Deenasa_97, Devonte_94, Gervas_97, GlenHope_97, Glubnar_95, Halfpint_95, HarveySr_93, Heathcliff_96, Jackstina_89, Kamiyu_96, Kronus_96, LestyG_94, Marley1013_94, Marlia_96, MmasiCarm_97, Mortcellus_96, Morty007_94, Neos5_95, Nozo_96, Obutu_98, OrangeOswald_95, Phaedrus_91, Phayeta_98, Philly_95, Phlyer_96, Pipefish_95, RagingRooster_96, Rita1961_97, RomaT_96, Shenandoah_96, SlippinJimmy_99, SwainyDoc_96, SynergyX_97, TinyTerror_97, Tydolla_92, Yahalom_94, Yinz_94,

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

- Chentzyk_98, Olivio_96,

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

- 39HC_092, 40BC_092, Acadian_89, AlanGrant_90, Allegro_84, Antihero_89, Apex_91, Arbiter_81, Ares_84, Austelle_90, Bae_87, Bananafish_85, BirdsNest_104, Blocker23_84, BlueHusk_97, BobbyK_90, Boehler_94, Boyle_84, BrownCNA_90, Brownie5_84, CRB2_88, Calamitous_85, ChrisnMich_91, Chunky_95, Coffee_83, Cooper_91, DigitDog_91, Donny_89, EastView9101_88, ElvisPhasley_102, Epah_89, Fanaw_85, Faze9_83, ForDig_89, Frederick_91, FrenchFry_85, Funsized_88, GinPorsche_89, Glass_86, Godines_84, Gyarad_0095, HSavage_94, Hally898_87, Hangman_90, Hashim76_100, Heath_84, Hedgerow_84, Holeinone_84, Horchata_91, Hosp_087, Hydro_90, Imvubu_92, ItsyBitsy1_81, JAMaL_90, JaguarMi_84, Jolie1_089, Kaleb_84, KarasumaRum_87, KayaCho_87, Kheth_84, Knocker_87, Kolhan_85, Lambano_87, Lars_85, Laurie_83, Lephleur_84, LilMcDreamy_88, LilSmirk_84, LizLemon_84, Lolalove_92, Magpie_86, MasterPo_85, Mithril_88, Mudslide_91, Mysterious_90, Nanao_89, Nangang_90, Nehemiah_88, Nigel_85, Opia_85, PenguinLover67_87, Phantasmagoria_83, Phelemich_86, Pops_94, Poster_88, PrinceCharming_84, Prince_90, QueenPie_82, Quesadilla_90, Qyrzula_75, RawrgerThat_88, Reprobate_88, Rhinoforte_84, Rinkes_86, Rita130_88, Robyn_98, Roscoe_95, Rosebush_82, Sabella_84, Saguaro_82, Serendipitous_89, Shenyu_90, SirJeffery_87, Stinger_87, StinkyVeggy_87, Suigeneris_90, TA17A_87, Tinciduntolum_85, Tres_84, Vaishali24_97, Vic9_00082, Vincenzo_89, VioletZ_92, Vivaldi_97, Waleliano_89, West99_84, Xincheng_82, Zemanar_88, Zenteno07_105,

Summary by start number:

Start 29:

- Found in 5 of 173 (2.9%) of genes in pham
- Manual Annotations of this start: 1 of 133
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Kheth_84 (B2),

Start 33:

- Found in 32 of 173 (18.5%) of genes in pham
- Manual Annotations of this start: 18 of 133
- Called 56.2% of time when present
- Phage (with cluster) where this start called: Arbiter_81 (B2), Ares_84 (B2), Bananafish_85 (B2), Brownie5_84 (B2), FrenchFry_85 (B2), Glass_86 (B2), Godines_84 (B2), Hedgerow_84 (B2), Holeinone_84 (B2), ItsyBitsy1_81 (B2), LizLemon_84 (B2), Opia_85 (B2), Qyrzula_75 (B2), Rhinoforte_84 (B2), Rosebush_82 (B2), Sabella_84 (B2), TA17A_87 (B2), Tinciduntolum_85 (B2),

Start 35:

- Found in 37 of 173 (21.4%) of genes in pham
- Manual Annotations of this start: 5 of 133
- Called 18.9% of time when present
- Phage (with cluster) where this start called: LilSmirk_84 (B2), PrinceCharming_84 (B2), Robyn_98 (B1), Roscoe_95 (B1), Tres_84 (B2), Vaishali24_97 (B1), West99_84 (B2),

Start 36:

- Found in 4 of 173 (2.3%) of genes in pham
- Manual Annotations of this start: 3 of 133
- Called 75.0% of time when present
- Phage (with cluster) where this start called: Acadian_89 (B5), Donny_89 (B5), Suigeneris_90 (B5),

Start 38:

- Found in 1 of 173 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 133
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bae_87 (B5),

Start 39:

- Found in 1 of 173 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 133
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Zenteno07_105 (B13),

Start 40:

- Found in 29 of 173 (16.8%) of genes in pham
- Manual Annotations of this start: 18 of 133
- Called 93.1% of time when present
- Phage (with cluster) where this start called: Antihero_89 (B4), Apex_91 (B4), Austelle_90 (B4), BobbyK_90 (B4), BrownCNA_90 (B4), EastView9101_88 (B5), Epah_89 (B4), Fanaw_85 (B4), Frederick_91 (B4), GinPorsche_89 (B4), Hally898_87 (B4), Hangman_90 (B4), Heath_84 (B4), Hydro_90 (B4), JAMaL_90 (B4), JaguarMi_84 (B4), Lambano_87 (B4), Lolalove_92 (B4), Magpie_86 (B4), Mithril_88 (B4), Mudslide_91 (B4), Nanao_89 (B4), Poster_88 (B4), Prince_90 (B4), VioletZ_92 (B4), Waleliano_89 (B4), Zemanar_88 (B4),

Start 42:

- Found in 2 of 173 (1.2%) of genes in pham
- Manual Annotations of this start: 2 of 133
- Called 100.0% of time when present

- Phage (with cluster) where this start called: BlueHusk_97 (B1), Horchata_91 (B1),

Start 43:

- Found in 6 of 173 (3.5%) of genes in pham
- Manual Annotations of this start: 1 of 133
- Called 100.0% of time when present
- Phage (with cluster) where this start called: 39HC_092 (B6), 40BC_092 (B6), ForDig_89 (B6), Hosp_087 (B6), Jolie1_089 (B6), KayaCho_87 (B6),

Start 44:

- Found in 37 of 173 (21.4%) of genes in pham
- Manual Annotations of this start: 12 of 133
- Called 37.8% of time when present
- Phage (with cluster) where this start called: Allegro_84 (B2), Blocker23_84 (B2), Boyle_84 (B2), Calamitous_85 (B2), Coffee_83 (B2), Faze9_83 (B2), Kaleb_84 (B2), Kolhan_85 (B2), Lars_85 (B2), Laurie_83 (B2), Lephleur_84 (B2), MasterPo_85 (B2), Phantasmagoria_83 (B2), Vic9_00082 (B2),

Start 45:

- Found in 7 of 173 (4.0%) of genes in pham
- Manual Annotations of this start: 5 of 133
- Called 85.7% of time when present
- Phage (with cluster) where this start called: Boehler_94 (B1), Chunky_95 (B1), ElvisPhasley_102 (B1), Gyarad_0095 (B1), HSavage_94 (B1), Vivaldi_97 (B1),

Start 49:

- Found in 1 of 173 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 133
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Imvubu_92 (B10),

Start 50:

- Found in 17 of 173 (9.8%) of genes in pham
- Manual Annotations of this start: 3 of 133
- Called 70.6% of time when present
- Phage (with cluster) where this start called: DigitDog_91 (B5), KarasumaRum_87 (B5), Mysterious_90 (B5), Nangang_90 (B5), Nehemiah_88 (B5), Phelemich_86 (B5), Reprobate_88 (B5), Rita130_88 (B5), Serendipitous_89 (B5), Shenyu_90 (B5), SirJeffery_87 (B5), StinkyVeggy_87 (B5),

Start 51:

- Found in 35 of 173 (20.2%) of genes in pham
- Manual Annotations of this start: 7 of 133
- Called 25.7% of time when present
- Phage (with cluster) where this start called: AlanGrant_90 (B4), ChrisnMich_91 (B4), Cooper_91 (B4), Nigel_85 (B4), QueenPie_82 (B4), RawrgerThat_88 (B4), Stinger_87 (B4), Vincenzo_89 (B4), Xincheng_82 (B4),

Start 52:

- Found in 1 of 173 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 133
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Quesadilla_90 (B9),

Start 53:

- Found in 3 of 173 (1.7%) of genes in pham
- Manual Annotations of this start: 2 of 133
- Called 66.7% of time when present
- Phage (with cluster) where this start called: BirdsNest_104 (B13), Hashim76_100 (B13),

Start 54:

- Found in 12 of 173 (6.9%) of genes in pham
- Manual Annotations of this start: 1 of 133
- Called 8.3% of time when present
- Phage (with cluster) where this start called: Pops_94 (B1),

Start 55:

- Found in 1 of 173 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 133
- Called 100.0% of time when present
- Phage (with cluster) where this start called: LilMcDreamy_88 (B12),

Start 57:

- Found in 3 of 173 (1.7%) of genes in pham
- Manual Annotations of this start: 1 of 133
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Rinkes_86 (B9),

Start 62:

- Found in 9 of 173 (5.2%) of genes in pham
- Manual Annotations of this start: 2 of 133
- Called 22.2% of time when present
- Phage (with cluster) where this start called: Funsized_88 (B9), Knocker_87 (B9),

Start 64:

- Found in 15 of 173 (8.7%) of genes in pham
- Manual Annotations of this start: 3 of 133
- Called 20.0% of time when present
- Phage (with cluster) where this start called: CRB2_88 (B9), PenguinLover67_87 (B9), Saguaro_82 (B7),

Start 68:

- Found in 54 of 173 (31.2%) of genes in pham
- Manual Annotations of this start: 44 of 133
- Called 96.3% of time when present
- Phage (with cluster) where this start called: Abinghost_96 (B3), Akoma_97 (B3), Athena_98 (B3), Audrey_96 (B3), Baloo_95 (B3), Ben11_96 (B3), Bernardo_93 (B3), Briakila_97 (B3), Casbah_96 (B3), ChaChing_96 (B3), Chalmers_96 (B3), Chandler_96 (B3), Compostia_95 (B3), Corofin_96 (B3), Daisy_95 (B3), Deenasa_97 (B3), Devonte_94 (B3), Gervas_97 (B3), GlenHope_97 (B3), Glubnar_95 (B3), Halfpint_95 (B3), HarveySr_93 (B3), Heathcliff_96 (B3), Jackstina_89 (B3), Kamiyu_96 (B3), Kronus_96 (B3), LestyG_94 (B3), Marley1013_94 (B3), Marlia_96 (B3), MmasiCarm_97 (B3), Mortcellus_96 (B3), Morty007_94 (B3), Neos5_95 (B3), Nozo_96 (B3), Obutu_98 (B3), OrangeOswald_95 (B3), Phaedrus_91 (B3), Phayeta_98 (B3), Philly_95 (B3), Phlyer_96 (B3), Pipefish_95 (B3),

RagingRooster_96 (B3), Rita1961_97 (B3), RomaT_96 (B3), Shenandoah_96 (B3), SlippinJimmy_99 (B3), SwainyDoc_96 (B3), SynergyX_97 (B3), TinyTerror_97 (B3), Tydolla_92 (B3), Yahalom_94 (B3), Yinz_94 (B3),

Start 76:

- Found in 60 of 173 (34.7%) of genes in pham
- No Manual Annotations of this start.
- Called 3.3% of time when present
- Phage (with cluster) where this start called: Chentzyk_98 (B3), Olivio_96 (B3),

Summary by clusters:

There are 11 clusters represented in this pham: B10, B4, B5, B6, B7, B12, B1, B2, B3, B9, B13,

Info for manual annotations of cluster B1:

- Start number 35 was manually annotated 3 times for cluster B1.
- Start number 42 was manually annotated 2 times for cluster B1.
- Start number 45 was manually annotated 5 times for cluster B1.
- Start number 54 was manually annotated 1 time for cluster B1.

Info for manual annotations of cluster B10:

- Start number 49 was manually annotated 1 time for cluster B10.

Info for manual annotations of cluster B12:

- Start number 55 was manually annotated 1 time for cluster B12.

Info for manual annotations of cluster B13:

- Start number 39 was manually annotated 1 time for cluster B13.
- Start number 53 was manually annotated 2 times for cluster B13.

Info for manual annotations of cluster B2:

- Start number 29 was manually annotated 1 time for cluster B2.
- Start number 33 was manually annotated 18 times for cluster B2.
- Start number 35 was manually annotated 2 times for cluster B2.
- Start number 44 was manually annotated 12 times for cluster B2.

Info for manual annotations of cluster B3:

- Start number 68 was manually annotated 44 times for cluster B3.

Info for manual annotations of cluster B4:

- Start number 40 was manually annotated 17 times for cluster B4.
- Start number 51 was manually annotated 7 times for cluster B4.

Info for manual annotations of cluster B5:

- Start number 36 was manually annotated 3 times for cluster B5.
- Start number 38 was manually annotated 1 time for cluster B5.
- Start number 40 was manually annotated 1 time for cluster B5.
- Start number 50 was manually annotated 3 times for cluster B5.

Info for manual annotations of cluster B6:

- Start number 43 was manually annotated 1 time for cluster B6.

Info for manual annotations of cluster B7:

- Start number 64 was manually annotated 1 time for cluster B7.

Info for manual annotations of cluster B9:

- Start number 52 was manually annotated 1 time for cluster B9.
- Start number 57 was manually annotated 1 time for cluster B9.
- Start number 62 was manually annotated 2 times for cluster B9.
- Start number 64 was manually annotated 2 times for cluster B9.

Gene Information:

Gene: 39HC_092 Start: 66926, Stop: 66300, Start Num: 43

Candidate Starts for 39HC_092:

(22, 67055), (Start: 43 @66926 has 1 MA's), (59, 66869), (80, 66740), (82, 66731), (86, 66710), (88, 66707), (94, 66638), (98, 66626), (116, 66485), (117, 66482), (119, 66464), (131, 66413), (140, 66356),

Gene: 40BC_092 Start: 66926, Stop: 66300, Start Num: 43

Candidate Starts for 40BC_092:

(22, 67055), (Start: 43 @66926 has 1 MA's), (59, 66869), (80, 66740), (82, 66731), (86, 66710), (88, 66707), (94, 66638), (98, 66626), (116, 66485), (117, 66482), (119, 66464), (131, 66413), (140, 66356),

Gene: Abinghost_96 Start: 65736, Stop: 65248, Start Num: 68

Candidate Starts for Abinghost_96:

(Start: 68 @65736 has 44 MA's), (75, 65697), (76, 65694), (80, 65619), (82, 65610), (90, 65568), (102, 65460), (109, 65418), (117, 65355), (119, 65337),

Gene: Acadian_89 Start: 66018, Stop: 65326, Start Num: 36

Candidate Starts for Acadian_89:

(2, 66897), (10, 66402), (27, 66072), (Start: 36 @66018 has 3 MA's), (Start: 50 @65943 has 3 MA's), (80, 65772), (82, 65763), (98, 65655), (114, 65538), (117, 65514), (119, 65496), (129, 65460), (142, 65379),

Gene: Akoma_97 Start: 65813, Stop: 65325, Start Num: 68

Candidate Starts for Akoma_97:

(Start: 68 @65813 has 44 MA's), (75, 65774), (76, 65771), (80, 65696), (82, 65687), (90, 65645), (102, 65537), (109, 65495), (117, 65432), (119, 65414),

Gene: AlanGrant_90 Start: 68004, Stop: 67411, Start Num: 51

Candidate Starts for AlanGrant_90:

(Start: 51 @68004 has 7 MA's), (75, 67911), (78, 67878), (87, 67800), (91, 67752), (98, 67716), (101, 67677), (107, 67635), (115, 67584), (117, 67572), (119, 67554), (125, 67524), (127, 67512), (130, 67500), (133, 67491),

Gene: Allegro_84 Start: 63711, Stop: 63181, Start Num: 44

Candidate Starts for Allegro_84:

(22, 63888), (Start: 33 @63777 has 18 MA's), (Start: 35 @63759 has 5 MA's), (Start: 44 @63711 has 12 MA's), (48, 63684), (56, 63657), (58, 63648), (70, 63606), (73, 63597), (80, 63501), (87, 63465), (94, 63393), (109, 63297), (110, 63291), (115, 63249), (117, 63237),

Gene: Antihero_89 Start: 66371, Stop: 65703, Start Num: 40

Candidate Starts for Antihero_89:

(Start: 40 @66371 has 18 MA's), (Start: 51 @66320 has 7 MA's), (80, 66152), (82, 66143), (91, 66071), (94, 66047), (107, 65954), (115, 65903), (117, 65891), (119, 65873), (124, 65855), (125, 65852), (126, 65843), (127, 65840), (130, 65828), (135, 65804), (141, 65759), (143, 65747), (144, 65744),

Gene: Apex_91 Start: 67472, Stop: 66804, Start Num: 40

Candidate Starts for Apex_91:

(21, 67640), (24, 67577), (Start: 40 @67472 has 18 MA's), (Start: 51 @67421 has 7 MA's), (75, 67331), (80, 67253), (82, 67244), (91, 67172), (94, 67148), (107, 67055), (115, 67004), (117, 66992), (119, 66974), (124, 66956), (125, 66953), (127, 66941), (130, 66929), (135, 66905), (141, 66860), (143, 66848), (144, 66845),

Gene: Arbiter_81 Start: 63817, Stop: 63221, Start Num: 33

Candidate Starts for Arbiter_81:

(22, 63928), (Start: 33 @63817 has 18 MA's), (Start: 35 @63799 has 5 MA's), (Start: 44 @63751 has 12 MA's), (48, 63724), (56, 63697), (58, 63688), (70, 63646), (73, 63637), (80, 63541), (87, 63505), (94, 63433), (109, 63337), (110, 63331), (115, 63289), (117, 63277),

Gene: Ares_84 Start: 63776, Stop: 63180, Start Num: 33

Candidate Starts for Ares_84:

(22, 63887), (Start: 33 @63776 has 18 MA's), (Start: 35 @63758 has 5 MA's), (Start: 44 @63710 has 12 MA's), (48, 63683), (56, 63656), (58, 63647), (70, 63605), (73, 63596), (80, 63500), (87, 63464), (94, 63392), (109, 63296), (110, 63290), (115, 63248), (117, 63236),

Gene: Athena_98 Start: 66509, Stop: 66021, Start Num: 68

Candidate Starts for Athena_98:

(Start: 68 @66509 has 44 MA's), (75, 66470), (76, 66467), (80, 66392), (82, 66383), (90, 66341), (102, 66233), (109, 66191), (117, 66128), (119, 66110),

Gene: Audrey_96 Start: 65763, Stop: 65275, Start Num: 68

Candidate Starts for Audrey_96:

(Start: 68 @65763 has 44 MA's), (75, 65724), (76, 65721), (80, 65646), (82, 65637), (90, 65595), (102, 65487), (109, 65445), (117, 65382), (119, 65364),

Gene: Austelle_90 Start: 68073, Stop: 67420, Start Num: 40

Candidate Starts for Austelle_90:

(21, 68241), (24, 68178), (Start: 40 @68073 has 18 MA's), (Start: 51 @68022 has 7 MA's), (75, 67929), (78, 67896), (80, 67851), (82, 67842), (91, 67770), (94, 67746), (107, 67653), (115, 67602), (117, 67590), (119, 67572), (124, 67554), (125, 67551), (130, 67527), (144, 67455), (146, 67452),

Gene: Bae_87 Start: 66191, Stop: 65547, Start Num: 38

Candidate Starts for Bae_87:

(Start: 38 @66191 has 1 MA's), (Start: 50 @66128 has 3 MA's), (80, 65963), (82, 65954), (98, 65846), (102, 65804), (114, 65729), (117, 65705), (119, 65687), (129, 65651), (132, 65642),

Gene: Baloo_95 Start: 65616, Stop: 65128, Start Num: 68

Candidate Starts for Baloo_95:

(Start: 68 @65616 has 44 MA's), (75, 65577), (76, 65574), (80, 65499), (82, 65490), (90, 65448), (102, 65340), (109, 65298), (117, 65235), (119, 65217),

Gene: Bananafish_85 Start: 63713, Stop: 63117, Start Num: 33

Candidate Starts for Bananafish_85:

(22, 63824), (Start: 33 @63713 has 18 MA's), (Start: 35 @63695 has 5 MA's), (Start: 44 @63647 has 12 MA's), (48, 63620), (56, 63593), (58, 63584), (70, 63542), (73, 63533), (80, 63437), (87, 63401), (94, 63329), (109, 63233), (110, 63227), (115, 63185), (117, 63173),

Gene: Ben11_96 Start: 65993, Stop: 65505, Start Num: 68

Candidate Starts for Ben11_96:

(Start: 68 @65993 has 44 MA's), (75, 65954), (76, 65951), (80, 65876), (82, 65867), (90, 65825), (102, 65717), (109, 65675), (117, 65612), (119, 65594),

Gene: Bernardo_93 Start: 65287, Stop: 64799, Start Num: 68

Candidate Starts for Bernardo_93:

(Start: 68 @65287 has 44 MA's), (75, 65248), (76, 65245), (80, 65170), (82, 65161), (90, 65119), (102, 65011), (109, 64969), (117, 64906), (119, 64888),

Gene: BirdsNest_104 Start: 70091, Stop: 69573, Start Num: 53

Candidate Starts for BirdsNest_104:

(Start: 53 @70091 has 2 MA's), (Start: 57 @70070 has 1 MA's), (63, 70049), (71, 70022), (72, 70019), (87, 69890), (90, 69872), (94, 69815), (97, 69806), (117, 69656),

Gene: Blocker23_84 Start: 63711, Stop: 63181, Start Num: 44

Candidate Starts for Blocker23_84:

(1, 65055), (4, 64545), (7, 64293), (12, 64113), (19, 63984), (Start: 29 @63789 has 1 MA's), (Start: 44 @63711 has 12 MA's), (48, 63684), (56, 63657), (58, 63648), (70, 63606), (73, 63597), (80, 63501), (87, 63465), (94, 63393), (109, 63297), (110, 63291), (115, 63249), (117, 63237),

Gene: BlueHusk_97 Start: 66586, Stop: 65990, Start Num: 42

Candidate Starts for BlueHusk_97:

(Start: 42 @66586 has 2 MA's), (Start: 54 @66529 has 1 MA's), (Start: 64 @66487 has 3 MA's), (80, 66361), (83, 66340), (87, 66328), (94, 66256), (112, 66142), (117, 66103), (119, 66085),

Gene: BobbyK_90 Start: 66980, Stop: 66312, Start Num: 40

Candidate Starts for BobbyK_90:

(21, 67148), (24, 67085), (Start: 40 @66980 has 18 MA's), (Start: 51 @66929 has 7 MA's), (75, 66839), (80, 66761), (82, 66752), (91, 66680), (94, 66656), (107, 66563), (115, 66512), (117, 66500), (119, 66482), (124, 66464), (125, 66461), (127, 66449), (130, 66437), (135, 66413), (141, 66368), (143, 66356), (144, 66353),

Gene: Boehler_94 Start: 66718, Stop: 66140, Start Num: 45

Candidate Starts for Boehler_94:

(Start: 45 @66718 has 5 MA's), (Start: 54 @66679 has 1 MA's), (Start: 64 @66637 has 3 MA's), (80, 66511), (83, 66490), (87, 66478), (94, 66406), (112, 66292), (117, 66253), (119, 66235),

Gene: Boyle_84 Start: 63759, Stop: 63229, Start Num: 44

Candidate Starts for Boyle_84:

(22, 63936), (Start: 33 @63825 has 18 MA's), (Start: 35 @63807 has 5 MA's), (Start: 44 @63759 has 12 MA's), (48, 63732), (56, 63705), (58, 63696), (70, 63654), (73, 63645), (80, 63549), (87, 63513), (94, 63441), (109, 63345), (110, 63339), (115, 63297), (117, 63285),

Gene: Briakila_97 Start: 66267, Stop: 65779, Start Num: 68

Candidate Starts for Briakila_97:

(Start: 68 @66267 has 44 MA's), (75, 66228), (76, 66225), (80, 66150), (82, 66141), (90, 66099), (102, 65991), (109, 65949), (117, 65886), (119, 65868),

Gene: BrownCNA_90 Start: 67488, Stop: 66835, Start Num: 40

Candidate Starts for BrownCNA_90:

(21, 67656), (24, 67593), (Start: 40 @67488 has 18 MA's), (Start: 51 @67437 has 7 MA's), (75, 67344), (78, 67311), (80, 67266), (82, 67257), (91, 67185), (94, 67161), (107, 67068), (115, 67017), (117, 67005), (119, 66987), (124, 66969), (125, 66966), (130, 66942), (144, 66870), (146, 66867),

Gene: Brownie5_84 Start: 63825, Stop: 63229, Start Num: 33

Candidate Starts for Brownie5_84:

(22, 63936), (Start: 33 @63825 has 18 MA's), (Start: 35 @63807 has 5 MA's), (Start: 44 @63759 has 12 MA's), (48, 63732), (56, 63705), (58, 63696), (70, 63654), (73, 63645), (80, 63549), (87, 63513), (94, 63441), (109, 63345), (110, 63339), (115, 63297), (117, 63285),

Gene: CRB2_88 Start: 67867, Stop: 67412, Start Num: 64

Candidate Starts for CRB2_88:

(8, 68446), (18, 68266), (Start: 64 @67867 has 3 MA's), (67, 67858), (71, 67840), (81, 67735), (85, 67708), (94, 67633), (97, 67624), (98, 67621), (115, 67492), (117, 67480), (119, 67462),

Gene: Calamitous_85 Start: 63642, Stop: 63112, Start Num: 44

Candidate Starts for Calamitous_85:

(22, 63819), (Start: 33 @63708 has 18 MA's), (Start: 35 @63690 has 5 MA's), (Start: 44 @63642 has 12 MA's), (48, 63615), (56, 63588), (58, 63579), (70, 63537), (73, 63528), (80, 63432), (87, 63396), (94, 63324), (109, 63228), (110, 63222), (115, 63180), (117, 63168),

Gene: Casbah_96 Start: 66078, Stop: 65590, Start Num: 68

Candidate Starts for Casbah_96:

(Start: 68 @66078 has 44 MA's), (75, 66039), (76, 66036), (80, 65961), (82, 65952), (90, 65910), (102, 65802), (109, 65760), (117, 65697), (119, 65679),

Gene: ChaChing_96 Start: 65776, Stop: 65288, Start Num: 68

Candidate Starts for ChaChing_96:

(Start: 68 @65776 has 44 MA's), (75, 65737), (76, 65734), (80, 65659), (82, 65650), (90, 65608), (102, 65500), (109, 65458), (117, 65395), (119, 65377),

Gene: Chalmers_96 Start: 66514, Stop: 66026, Start Num: 68

Candidate Starts for Chalmers_96:

(Start: 68 @66514 has 44 MA's), (75, 66475), (76, 66472), (80, 66397), (82, 66388), (90, 66346), (102, 66238), (109, 66196), (117, 66133), (119, 66115),

Gene: Chandler_96 Start: 66552, Stop: 66064, Start Num: 68

Candidate Starts for Chandler_96:

(Start: 68 @66552 has 44 MA's), (75, 66513), (76, 66510), (80, 66435), (82, 66426), (90, 66384), (102, 66276), (109, 66234), (117, 66171), (119, 66153),

Gene: Chentzyk_98 Start: 66666, Stop: 66220, Start Num: 76

Candidate Starts for Chentzyk_98:

(Start: 68 @66708 has 44 MA's), (75, 66669), (76, 66666), (80, 66591), (82, 66582), (90, 66540), (102, 66432), (109, 66390), (117, 66327), (119, 66309),

Gene: ChrisnMich_91 Start: 66059, Stop: 65439, Start Num: 51

Candidate Starts for ChrisnMich_91:

(14, 66395), (15, 66386), (21, 66218), (Start: 51 @66059 has 7 MA's), (78, 65930), (82, 65876), (84, 65858), (94, 65780), (105, 65693), (115, 65636), (117, 65624), (119, 65606), (124, 65579), (130, 65552), (142, 65492),

Gene: Chunky_95 Start: 66380, Stop: 65802, Start Num: 45

Candidate Starts for Chunky_95:

(Start: 45 @66380 has 5 MA's), (Start: 54 @66341 has 1 MA's), (Start: 64 @66299 has 3 MA's), (80, 66173), (83, 66152), (87, 66140), (94, 66068), (112, 65954), (117, 65915), (119, 65897),

Gene: Coffee_83 Start: 63752, Stop: 63222, Start Num: 44

Candidate Starts for Coffee_83:

(22, 63929), (Start: 33 @63818 has 18 MA's), (Start: 35 @63800 has 5 MA's), (Start: 44 @63752 has 12 MA's), (48, 63725), (56, 63698), (58, 63689), (70, 63647), (73, 63638), (80, 63542), (87, 63506), (94, 63434), (109, 63338), (110, 63332), (115, 63290), (117, 63278),

Gene: Compostia_95 Start: 66230, Stop: 65742, Start Num: 68

Candidate Starts for Compostia_95:

(Start: 68 @66230 has 44 MA's), (75, 66191), (76, 66188), (80, 66113), (82, 66104), (90, 66062), (102, 65954), (109, 65912), (117, 65849), (119, 65831),

Gene: Cooper_91 Start: 66596, Stop: 65976, Start Num: 51

Candidate Starts for Cooper_91:

(21, 66749), (Start: 51 @66596 has 7 MA's), (78, 66467), (82, 66413), (84, 66395), (94, 66317), (115, 66173), (117, 66161), (119, 66143), (124, 66116), (130, 66089), (142, 66029),

Gene: Corofin_96 Start: 65787, Stop: 65299, Start Num: 68

Candidate Starts for Corofin_96:

(Start: 68 @65787 has 44 MA's), (75, 65748), (76, 65745), (80, 65670), (82, 65661), (90, 65619), (102, 65511), (109, 65469), (117, 65406), (119, 65388),

Gene: Daisy_95 Start: 65336, Stop: 64848, Start Num: 68

Candidate Starts for Daisy_95:

(Start: 68 @65336 has 44 MA's), (75, 65297), (76, 65294), (80, 65219), (82, 65210), (90, 65168), (102, 65060), (109, 65018), (117, 64955), (119, 64937),

Gene: Deenasa_97 Start: 66990, Stop: 66502, Start Num: 68

Candidate Starts for Deenasa_97:

(Start: 68 @66990 has 44 MA's), (75, 66951), (76, 66948), (80, 66873), (82, 66864), (90, 66822), (102, 66714), (109, 66672), (117, 66609), (119, 66591),

Gene: Devonte_94 Start: 65402, Stop: 64914, Start Num: 68

Candidate Starts for Devonte_94:

(Start: 68 @65402 has 44 MA's), (75, 65363), (76, 65360), (80, 65285), (82, 65276), (90, 65234), (102, 65126), (109, 65084), (117, 65021), (119, 65003),

Gene: DigitDog_91 Start: 66458, Stop: 65841, Start Num: 50

Candidate Starts for DigitDog_91:

(10, 66893), (27, 66563), (Start: 50 @66458 has 3 MA's), (80, 66290), (82, 66281), (98, 66173), (114, 66056), (117, 66032), (119, 66014), (138, 65921),

Gene: Donny_89 Start: 65845, Stop: 65159, Start Num: 36

Candidate Starts for Donny_89:

(2, 66724), (10, 66229), (27, 65899), (Start: 36 @65845 has 3 MA's), (Start: 50 @65770 has 3 MA's), (80, 65605), (82, 65596), (98, 65488), (114, 65371), (117, 65347), (119, 65329), (129, 65293), (142, 65212),

Gene: EastView9101_88 Start: 65729, Stop: 65082, Start Num: 40

Candidate Starts for EastView9101_88:

(31, 65771), (Start: 40 @65729 has 18 MA's), (Start: 50 @65675 has 3 MA's), (80, 65510), (98, 65393), (114, 65276), (117, 65252), (119, 65234), (145, 65117),

Gene: ElvisPhasley_102 Start: 67655, Stop: 67077, Start Num: 45

Candidate Starts for ElvisPhasley_102:

(Start: 45 @67655 has 5 MA's), (Start: 54 @67616 has 1 MA's), (Start: 64 @67574 has 3 MA's), (80, 67448), (83, 67427), (87, 67415), (94, 67343), (112, 67229), (117, 67190), (119, 67172),

Gene: Epah_89 Start: 66371, Stop: 65703, Start Num: 40

Candidate Starts for Epah_89:

(Start: 40 @66371 has 18 MA's), (Start: 51 @66320 has 7 MA's), (80, 66152), (82, 66143), (91, 66071), (94, 66047), (107, 65954), (115, 65903), (117, 65891), (119, 65873), (124, 65855), (125, 65852), (126, 65843), (127, 65840), (130, 65828), (135, 65804), (141, 65759), (143, 65747), (144, 65744),

Gene: Fanaw_85 Start: 67084, Stop: 66422, Start Num: 40

Candidate Starts for Fanaw_85:

(21, 67252), (24, 67189), (Start: 40 @67084 has 18 MA's), (Start: 51 @67033 has 7 MA's), (75, 66943), (80, 66865), (82, 66856), (91, 66784), (94, 66760), (107, 66667), (109, 66664), (115, 66616), (117, 66604), (119, 66586), (124, 66568), (125, 66565), (127, 66553), (130, 66541), (135, 66517), (137, 66514), (141, 66478), (144, 66463),

Gene: Faze9_83 Start: 63774, Stop: 63244, Start Num: 44

Candidate Starts for Faze9_83:

(22, 63951), (Start: 33 @63840 has 18 MA's), (Start: 35 @63822 has 5 MA's), (Start: 44 @63774 has 12 MA's), (48, 63747), (56, 63720), (58, 63711), (70, 63669), (73, 63660), (80, 63564), (87, 63528), (94, 63456), (109, 63360), (110, 63354), (115, 63312), (117, 63300),

Gene: ForDig_89 Start: 66193, Stop: 65561, Start Num: 43

Candidate Starts for ForDig_89:

(22, 66334), (Start: 43 @66193 has 1 MA's), (61, 66124), (66, 66115), (80, 65995), (82, 65986), (86, 65965), (94, 65893), (98, 65881), (116, 65740), (117, 65737), (119, 65719), (125, 65692), (136, 65650),

Gene: Frederick_91 Start: 67286, Stop: 66618, Start Num: 40

Candidate Starts for Frederick_91:

(21, 67454), (24, 67391), (Start: 40 @67286 has 18 MA's), (Start: 51 @67235 has 7 MA's), (75, 67145), (80, 67067), (82, 67058), (91, 66986), (94, 66962), (107, 66869), (115, 66818), (117, 66806), (119, 66788), (124, 66770), (125, 66767), (127, 66755), (130, 66743), (135, 66719), (141, 66674), (143, 66662), (144, 66659),

Gene: FrenchFry_85 Start: 63827, Stop: 63231, Start Num: 33

Candidate Starts for FrenchFry_85:

(22, 63938), (Start: 33 @63827 has 18 MA's), (Start: 35 @63809 has 5 MA's), (Start: 44 @63761 has 12 MA's), (48, 63734), (56, 63707), (58, 63698), (70, 63656), (73, 63647), (80, 63551), (87, 63515), (94, 63443), (109, 63347), (110, 63341), (115, 63299), (117, 63287),

Gene: Funsized_88 Start: 68273, Stop: 67824, Start Num: 62

Candidate Starts for Funsized_88:

(46, 68339), (47, 68333), (Start: 62 @68273 has 2 MA's), (80, 68144), (81, 68138), (85, 68114), (115, 67898), (117, 67886), (119, 67868), (121, 67856),

Gene: Gervas_97 Start: 66231, Stop: 65743, Start Num: 68

Candidate Starts for Gervas_97:

(Start: 68 @66231 has 44 MA's), (75, 66192), (76, 66189), (80, 66114), (82, 66105), (90, 66063), (102, 65955), (109, 65913), (117, 65850), (119, 65832),

Gene: GinPorsche_89 Start: 66368, Stop: 65700, Start Num: 40

Candidate Starts for GinPorsche_89:

(5, 67130), (21, 66536), (24, 66473), (Start: 40 @66368 has 18 MA's), (Start: 51 @66317 has 7 MA's), (Start: 62 @66278 has 2 MA's), (75, 66227), (76, 66224), (78, 66194), (80, 66149), (82, 66140), (91, 66068), (94, 66044), (107, 65951), (115, 65900), (117, 65888), (119, 65870), (124, 65852), (125, 65849), (126, 65840), (127, 65837), (130, 65825), (135, 65801), (141, 65756), (143, 65744), (144, 65741),

Gene: Glass_86 Start: 63834, Stop: 63238, Start Num: 33

Candidate Starts for Glass_86:

(22, 63945), (Start: 33 @63834 has 18 MA's), (Start: 35 @63816 has 5 MA's), (Start: 44 @63768 has 12 MA's), (48, 63741), (58, 63705), (70, 63663), (73, 63654), (80, 63558), (87, 63522), (94, 63450), (109, 63354), (110, 63348), (115, 63306), (117, 63294),

Gene: GlenHope_97 Start: 65806, Stop: 65318, Start Num: 68

Candidate Starts for GlenHope_97:

(Start: 68 @65806 has 44 MA's), (75, 65767), (76, 65764), (80, 65689), (82, 65680), (90, 65638), (102, 65530), (109, 65488), (117, 65425), (119, 65407),

Gene: Glubnar_95 Start: 65722, Stop: 65234, Start Num: 68

Candidate Starts for Glubnar_95:

(Start: 68 @65722 has 44 MA's), (75, 65683), (76, 65680), (80, 65605), (82, 65596), (90, 65554), (102, 65446), (109, 65404), (117, 65341), (119, 65323),

Gene: Godines_84 Start: 63740, Stop: 63144, Start Num: 33

Candidate Starts for Godines_84:

(22, 63851), (Start: 33 @63740 has 18 MA's), (Start: 35 @63722 has 5 MA's), (Start: 44 @63674 has 12 MA's), (48, 63647), (58, 63611), (70, 63569), (73, 63560), (80, 63464), (87, 63428), (94, 63356), (109, 63260), (110, 63254), (115, 63212), (117, 63200),

Gene: Gyarad_0095 Start: 66382, Stop: 65804, Start Num: 45

Candidate Starts for Gyarad_0095:

(Start: 45 @66382 has 5 MA's), (Start: 54 @66343 has 1 MA's), (Start: 64 @66301 has 3 MA's), (80, 66175), (83, 66154), (87, 66142), (94, 66070), (112, 65956), (117, 65917), (119, 65899),

Gene: HSavage_94 Start: 66365, Stop: 65787, Start Num: 45

Candidate Starts for HSavage_94:

(Start: 45 @66365 has 5 MA's), (Start: 54 @66326 has 1 MA's), (Start: 64 @66284 has 3 MA's), (80, 66158), (83, 66137), (87, 66125), (94, 66053), (112, 65939), (117, 65900), (119, 65882),

Gene: Halfpint_95 Start: 65551, Stop: 65063, Start Num: 68

Candidate Starts for Halfpint_95:

(Start: 68 @65551 has 44 MA's), (75, 65512), (76, 65509), (80, 65434), (82, 65425), (90, 65383), (102, 65275), (109, 65233), (117, 65170), (119, 65152),

Gene: Hally898_87 Start: 66208, Stop: 65540, Start Num: 40

Candidate Starts for Hally898_87:

(5, 66970), (21, 66376), (24, 66313), (Start: 40 @66208 has 18 MA's), (Start: 51 @66157 has 7 MA's), (Start: 62 @66118 has 2 MA's), (75, 66067), (76, 66064), (78, 66034), (80, 65989), (82, 65980), (91, 65908), (94, 65884), (107, 65791), (115, 65740), (117, 65728), (119, 65710), (124, 65692), (125, 65689), (126, 65680), (127, 65677), (130, 65665), (135, 65641), (141, 65596), (143, 65584), (144, 65581),

Gene: Hangman_90 Start: 67581, Stop: 66913, Start Num: 40

Candidate Starts for Hangman_90:

(21, 67749), (24, 67686), (Start: 40 @67581 has 18 MA's), (Start: 51 @67530 has 7 MA's), (75, 67440), (80, 67362), (82, 67353), (94, 67257), (107, 67164), (115, 67113), (117, 67101), (119, 67083), (124, 67065), (125, 67062), (127, 67050), (130, 67038), (135, 67014), (143, 66957), (144, 66954),

Gene: HarveySr_93 Start: 64875, Stop: 64387, Start Num: 68

Candidate Starts for HarveySr_93:

(Start: 68 @64875 has 44 MA's), (75, 64836), (76, 64833), (80, 64758), (82, 64749), (90, 64707), (102, 64599), (109, 64557), (117, 64494), (119, 64476),

Gene: Hashim76_100 Start: 69243, Stop: 68725, Start Num: 53

Candidate Starts for Hashim76_100:

(6, 70089), (Start: 53 @69243 has 2 MA's), (Start: 57 @69222 has 1 MA's), (63, 69201), (71, 69174), (72, 69171), (87, 69042), (90, 69024), (94, 68967), (97, 68958), (117, 68808),

Gene: Heath_84 Start: 65351, Stop: 64701, Start Num: 40

Candidate Starts for Heath_84:

(21, 65519), (24, 65456), (Start: 40 @65351 has 18 MA's), (Start: 51 @65300 has 7 MA's), (75, 65210), (80, 65132), (82, 65123), (91, 65051), (94, 65027), (107, 64934), (115, 64883), (117, 64871), (119, 64853), (124, 64835), (125, 64832), (130, 64808), (144, 64736), (146, 64733),

Gene: Heathcliff_96 Start: 65730, Stop: 65242, Start Num: 68

Candidate Starts for Heathcliff_96:

(Start: 68 @65730 has 44 MA's), (75, 65691), (76, 65688), (80, 65613), (82, 65604), (90, 65562), (102, 65454), (109, 65412), (117, 65349), (119, 65331),

Gene: Hedgerow_84 Start: 63791, Stop: 63195, Start Num: 33

Candidate Starts for Hedgerow_84:

(22, 63902), (Start: 33 @63791 has 18 MA's), (Start: 35 @63773 has 5 MA's), (Start: 44 @63725 has 12 MA's), (48, 63698), (56, 63671), (58, 63662), (70, 63620), (73, 63611), (80, 63515), (87, 63479), (94, 63407), (109, 63311), (110, 63305), (115, 63263), (117, 63251),

Gene: Holeinone_84 Start: 63681, Stop: 63085, Start Num: 33

Candidate Starts for Holeinone_84:

(22, 63792), (Start: 33 @63681 has 18 MA's), (Start: 35 @63663 has 5 MA's), (Start: 44 @63615 has 12 MA's), (48, 63588), (58, 63552), (70, 63510), (73, 63501), (80, 63405), (87, 63369), (94, 63297), (109, 63201), (110, 63195), (115, 63153), (117, 63141),

Gene: Horchata_91 Start: 66558, Stop: 65962, Start Num: 42

Candidate Starts for Horchata_91:

(20, 66816), (23, 66714), (Start: 42 @66558 has 2 MA's), (Start: 54 @66501 has 1 MA's), (Start: 64 @66459 has 3 MA's), (80, 66333), (83, 66312), (87, 66300), (112, 66114), (117, 66075), (119, 66057),

Gene: Hosp_087 Start: 64231, Stop: 63587, Start Num: 43

Candidate Starts for Hosp_087:

(22, 64360), (Start: 43 @64231 has 1 MA's), (59, 64174), (80, 64045), (86, 64015), (88, 64012), (94, 63943), (98, 63931), (116, 63790), (117, 63787), (119, 63769), (125, 63742), (131, 63715), (139, 63682),

Gene: Hydro_90 Start: 67357, Stop: 66692, Start Num: 40

Candidate Starts for Hydro_90:

(9, 67777), (21, 67525), (24, 67462), (Start: 40 @67357 has 18 MA's), (Start: 51 @67306 has 7 MA's), (75, 67216), (80, 67138), (82, 67129), (91, 67057), (94, 67033), (107, 66940), (115, 66889), (117, 66877), (119, 66859), (120, 66856), (124, 66841), (125, 66838), (127, 66826), (130, 66814), (135, 66790), (143, 66736), (144, 66733),

Gene: Imvubu_92 Start: 66340, Stop: 65831, Start Num: 49

Candidate Starts for Imvubu_92:

(34, 66430), (Start: 49 @66340 has 1 MA's), (67, 66280), (82, 66154), (89, 66127), (95, 66049), (112, 65932), (113, 65929), (115, 65905), (117, 65893), (119, 65875), (121, 65863),

Gene: ItsyBitsy1_81 Start: 63908, Stop: 63312, Start Num: 33

Candidate Starts for ItsyBitsy1_81:

(22, 64019), (Start: 33 @63908 has 18 MA's), (Start: 35 @63890 has 5 MA's), (Start: 44 @63842 has 12 MA's), (48, 63815), (58, 63779), (70, 63737), (73, 63728), (80, 63632), (87, 63596), (94, 63524), (109, 63428), (110, 63422), (115, 63380), (117, 63368),

Gene: JAMaL_90 Start: 66895, Stop: 66227, Start Num: 40

Candidate Starts for JAMaL_90:

(9, 67309), (21, 67057), (24, 66994), (30, 66937), (Start: 40 @66895 has 18 MA's), (Start: 51 @66844 has 7 MA's), (80, 66676), (82, 66667), (91, 66595), (94, 66571), (107, 66478), (115, 66427), (117, 66415), (119, 66397), (120, 66394), (124, 66379), (125, 66376), (127, 66364), (130, 66352), (135, 66328), (141, 66283), (143, 66271), (144, 66268),

Gene: Jackstina_89 Start: 65647, Stop: 65159, Start Num: 68

Candidate Starts for Jackstina_89:

(Start: 68 @65647 has 44 MA's), (75, 65608), (76, 65605), (80, 65530), (82, 65521), (90, 65479), (102, 65371), (109, 65329), (117, 65266), (119, 65248),

Gene: JaguarMi_84 Start: 67336, Stop: 66665, Start Num: 40

Candidate Starts for JaguarMi_84:

(16, 67675), (17, 67672), (21, 67504), (24, 67441), (Start: 40 @67336 has 18 MA's), (Start: 51 @67285 has 7 MA's), (75, 67195), (87, 67081), (91, 67033), (94, 67009), (99, 66985), (100, 66973), (107, 66916), (115, 66865), (117, 66853), (119, 66835), (124, 66817), (125, 66814), (127, 66802), (130, 66790), (135, 66766), (143, 66712), (144, 66709),

Gene: Jolie1_089 Start: 66284, Stop: 65610, Start Num: 43

Candidate Starts for Jolie1_089:

(22, 66428), (Start: 43 @66284 has 1 MA's), (Start: 62 @66203 has 2 MA's), (66, 66194), (80, 66074), (86, 66044), (94, 65972), (98, 65960), (116, 65819), (117, 65816), (119, 65798), (125, 65771), (131, 65747), (134, 65732),

Gene: Kaleb_84 Start: 63771, Stop: 63241, Start Num: 44

Candidate Starts for Kaleb_84:

(22, 63948), (Start: 33 @63837 has 18 MA's), (Start: 35 @63819 has 5 MA's), (Start: 44 @63771 has 12 MA's), (48, 63744), (58, 63708), (70, 63666), (73, 63657), (80, 63561), (87, 63525), (94, 63453), (109, 63357), (110, 63351), (115, 63309), (117, 63297),

Gene: Kamiyu_96 Start: 65734, Stop: 65246, Start Num: 68

Candidate Starts for Kamiyu_96:

(Start: 68 @65734 has 44 MA's), (75, 65695), (76, 65692), (80, 65617), (82, 65608), (90, 65566), (102, 65458), (109, 65416), (117, 65353), (119, 65335),

Gene: KarasumaRum_87 Start: 65724, Stop: 65134, Start Num: 50

Candidate Starts for KarasumaRum_87:

(26, 65826), (28, 65814), (Start: 35 @65796 has 5 MA's), (Start: 50 @65724 has 3 MA's), (80, 65550), (82, 65541), (98, 65433), (114, 65316), (117, 65292), (119, 65274), (132, 65217),

Gene: KayaCho_87 Start: 66154, Stop: 65498, Start Num: 43

Candidate Starts for KayaCho_87:

(Start: 43 @66154 has 1 MA's), (Start: 62 @66085 has 2 MA's), (79, 65983), (80, 65956), (85, 65926), (94, 65851), (98, 65839), (109, 65755), (116, 65698), (117, 65695), (119, 65677), (125, 65650), (131, 65623),

Gene: Kheth_84 Start: 63754, Stop: 63146, Start Num: 29

Candidate Starts for Kheth_84:

(1, 65020), (4, 64510), (7, 64258), (12, 64078), (19, 63949), (Start: 29 @63754 has 1 MA's), (Start: 44 @63676 has 12 MA's), (48, 63649), (56, 63622), (58, 63613), (70, 63571), (73, 63562), (80, 63466), (87, 63430), (94, 63358), (109, 63262), (110, 63256), (115, 63214), (117, 63202),

Gene: Knocker_87 Start: 67165, Stop: 66737, Start Num: 62

Candidate Starts for Knocker_87:

(11, 67660), (Start: 62 @67165 has 2 MA's), (71, 67135), (80, 67036), (82, 67027), (106, 66841), (108, 66835), (117, 66778), (119, 66760),

Gene: Kolhan_85 Start: 63664, Stop: 63134, Start Num: 44

Candidate Starts for Kolhan_85:

(22, 63841), (Start: 33 @63730 has 18 MA's), (Start: 35 @63712 has 5 MA's), (Start: 44 @63664 has 12 MA's), (48, 63637), (56, 63610), (58, 63601), (70, 63559), (73, 63550), (80, 63454), (87, 63418), (94, 63346), (109, 63250), (110, 63244), (115, 63202), (117, 63190),

Gene: Kronus_96 Start: 66819, Stop: 66331, Start Num: 68

Candidate Starts for Kronus_96:

(Start: 68 @66819 has 44 MA's), (75, 66780), (76, 66777), (80, 66702), (82, 66693), (90, 66651), (102, 66543), (109, 66501), (117, 66438), (119, 66420),

Gene: Lambano_87 Start: 66208, Stop: 65540, Start Num: 40

Candidate Starts for Lambano_87:

(5, 66970), (21, 66376), (24, 66313), (Start: 40 @66208 has 18 MA's), (Start: 51 @66157 has 7 MA's), (Start: 62 @66118 has 2 MA's), (75, 66067), (76, 66064), (78, 66034), (80, 65989), (82, 65980), (91, 65908), (94, 65884), (107, 65791), (115, 65740), (117, 65728), (119, 65710), (124, 65692), (125, 65689), (126, 65680), (127, 65677), (130, 65665), (135, 65641), (141, 65596), (143, 65584), (144, 65581),

Gene: Lars_85 Start: 63740, Stop: 63210, Start Num: 44

Candidate Starts for Lars_85:

(4, 64574), (7, 64322), (12, 64142), (19, 64013), (Start: 29 @63818 has 1 MA's), (Start: 44 @63740 has 12 MA's), (48, 63713), (56, 63686), (58, 63677), (70, 63635), (73, 63626), (80, 63530), (87, 63494), (94, 63422), (109, 63326), (110, 63320), (115, 63278), (117, 63266),

Gene: Laurie_83 Start: 63078, Stop: 62548, Start Num: 44

Candidate Starts for Laurie_83:

(4, 63918), (7, 63666), (12, 63486), (19, 63357), (Start: 29 @63162 has 1 MA's), (Start: 44 @63078 has 12 MA's), (48, 63051), (56, 63024), (58, 63015), (70, 62973), (73, 62964), (80, 62868), (87, 62832), (94, 62760), (109, 62664), (110, 62658), (115, 62616), (117, 62604),

Gene: Lephleur_84 Start: 63596, Stop: 63066, Start Num: 44

Candidate Starts for Lephleur_84:

(22, 63773), (Start: 33 @63662 has 18 MA's), (Start: 35 @63644 has 5 MA's), (Start: 44 @63596 has 12 MA's), (48, 63569), (58, 63533), (70, 63491), (73, 63482), (80, 63386), (87, 63350), (94, 63278), (109, 63182), (110, 63176), (115, 63134), (117, 63122),

Gene: LestyG_94 Start: 65305, Stop: 64817, Start Num: 68

Candidate Starts for LestyG_94:

(Start: 68 @65305 has 44 MA's), (75, 65266), (76, 65263), (80, 65188), (82, 65179), (90, 65137), (102, 65029), (109, 64987), (117, 64924), (119, 64906),

Gene: LilMcDreamy_88 Start: 66128, Stop: 65508, Start Num: 55

Candidate Starts for LilMcDreamy_88:

(Start: 55 @66128 has 1 MA's), (80, 65966), (87, 65933), (94, 65861), (98, 65849), (104, 65780), (115, 65717), (117, 65705), (147, 65528),

Gene: LilSmirk_84 Start: 63683, Stop: 63105, Start Num: 35

Candidate Starts for LilSmirk_84:

(22, 63812), (Start: 33 @63701 has 18 MA's), (Start: 35 @63683 has 5 MA's), (Start: 44 @63635 has 12 MA's), (48, 63608), (56, 63581), (58, 63572), (70, 63530), (73, 63521), (80, 63425), (87, 63389), (94, 63317), (109, 63221), (110, 63215), (115, 63173), (117, 63161),

Gene: LizLemon_84 Start: 63833, Stop: 63237, Start Num: 33

Candidate Starts for LizLemon_84:

(22, 63944), (Start: 33 @63833 has 18 MA's), (Start: 35 @63815 has 5 MA's), (Start: 44 @63767 has 12 MA's), (48, 63740), (56, 63713), (58, 63704), (70, 63662), (73, 63653), (80, 63557), (87, 63521), (94, 63449), (109, 63353), (110, 63347), (115, 63305), (117, 63293),

Gene: Lolalove_92 Start: 67385, Stop: 66732, Start Num: 40

Candidate Starts for Lolalove_92:

(21, 67553), (24, 67490), (Start: 40 @67385 has 18 MA's), (Start: 51 @67334 has 7 MA's), (75, 67241), (78, 67208), (80, 67163), (82, 67154), (91, 67082), (94, 67058), (107, 66965), (115, 66914), (117, 66902), (119, 66884), (124, 66866), (125, 66863), (130, 66839), (144, 66767), (146, 66764),

Gene: Magpie_86 Start: 67131, Stop: 66481, Start Num: 40

Candidate Starts for Magpie_86:

(21, 67299), (24, 67236), (Start: 40 @67131 has 18 MA's), (Start: 51 @67080 has 7 MA's), (75, 66990), (78, 66957), (80, 66912), (91, 66831), (94, 66807), (107, 66714), (115, 66663), (117, 66651), (119, 66633), (120, 66630), (124, 66615), (125, 66612), (127, 66600), (130, 66588), (135, 66564),

Gene: Marley1013_94 Start: 66265, Stop: 65777, Start Num: 68

Candidate Starts for Marley1013_94:

(Start: 68 @66265 has 44 MA's), (75, 66226), (76, 66223), (80, 66148), (82, 66139), (90, 66097), (102, 65989), (109, 65947), (117, 65884), (119, 65866),

Gene: Marlia_96 Start: 65827, Stop: 65339, Start Num: 68

Candidate Starts for Marlia_96:

(Start: 68 @65827 has 44 MA's), (75, 65788), (76, 65785), (80, 65710), (82, 65701), (90, 65659), (102, 65551), (109, 65509), (117, 65446), (119, 65428),

Gene: MasterPo_85 Start: 63636, Stop: 63106, Start Num: 44

Candidate Starts for MasterPo_85:

(22, 63813), (Start: 33 @63702 has 18 MA's), (Start: 35 @63684 has 5 MA's), (Start: 44 @63636 has 12 MA's), (48, 63609), (56, 63582), (58, 63573), (70, 63531), (73, 63522), (74, 63516), (80, 63426), (87, 63390), (94, 63318), (109, 63222), (110, 63216), (115, 63174), (117, 63162),

Gene: Mithril_88 Start: 67142, Stop: 66471, Start Num: 40

Candidate Starts for Mithril_88:

(21, 67310), (24, 67247), (Start: 40 @67142 has 18 MA's), (Start: 51 @67091 has 7 MA's), (75, 67001), (80, 66923), (82, 66914), (91, 66842), (94, 66818), (103, 66755), (107, 66725), (115, 66674), (117, 66662), (119, 66644), (124, 66626), (125, 66623), (127, 66611), (130, 66599), (135, 66575), (141, 66530), (142, 66521), (143, 66518), (144, 66515),

Gene: MmasiCarm_97 Start: 66162, Stop: 65674, Start Num: 68

Candidate Starts for MmasiCarm_97:

(Start: 68 @66162 has 44 MA's), (75, 66123), (76, 66120), (80, 66045), (82, 66036), (90, 65994), (102, 65886), (109, 65844), (117, 65781), (119, 65763),

Gene: Mortcellus_96 Start: 66900, Stop: 66412, Start Num: 68

Candidate Starts for Mortcellus_96:

(Start: 68 @66900 has 44 MA's), (75, 66861), (76, 66858), (80, 66783), (82, 66774), (90, 66732), (102, 66624), (109, 66582), (117, 66519), (119, 66501),

Gene: Morty007_94 Start: 66532, Stop: 66044, Start Num: 68

Candidate Starts for Morty007_94:

(Start: 68 @66532 has 44 MA's), (75, 66493), (76, 66490), (80, 66415), (82, 66406), (90, 66364), (102, 66256), (109, 66214), (117, 66151), (119, 66133),

Gene: Mudslide_91 Start: 67615, Stop: 66962, Start Num: 40

Candidate Starts for Mudslide_91:

(3, 68467), (21, 67783), (24, 67720), (Start: 40 @67615 has 18 MA's), (Start: 51 @67564 has 7 MA's), (75, 67471), (78, 67438), (80, 67393), (82, 67384), (91, 67312), (94, 67288), (107, 67195), (115, 67144), (117, 67132), (119, 67114), (124, 67096), (125, 67093), (130, 67069), (144, 66997), (146, 66994),

Gene: Mysterious_90 Start: 65876, Stop: 65298, Start Num: 50

Candidate Starts for Mysterious_90:

(10, 66308), (Start: 50 @65876 has 3 MA's), (77, 65771), (80, 65714), (82, 65705), (94, 65609), (98, 65597), (114, 65480), (115, 65468), (117, 65456), (119, 65438), (129, 65399),

Gene: Nanao_89 Start: 66221, Stop: 65553, Start Num: 40

Candidate Starts for Nanao_89:

(5, 66983), (21, 66389), (24, 66326), (Start: 40 @66221 has 18 MA's), (Start: 51 @66170 has 7 MA's), (Start: 62 @66131 has 2 MA's), (75, 66080), (76, 66077), (78, 66047), (80, 66002), (82, 65993), (91, 65921), (94, 65897), (107, 65804), (115, 65753), (117, 65741), (119, 65723), (124, 65705), (125, 65702), (126, 65693), (127, 65690), (130, 65678), (135, 65654), (141, 65609), (143, 65597), (144, 65594),

Gene: Nangang_90 Start: 66354, Stop: 65737, Start Num: 50

Candidate Starts for Nangang_90:

(10, 66789), (27, 66459), (Start: 50 @66354 has 3 MA's), (80, 66186), (82, 66177), (98, 66069), (114, 65952), (117, 65928), (119, 65910), (138, 65817),

Gene: Nehemiah_88 Start: 65744, Stop: 65178, Start Num: 50

Candidate Starts for Nehemiah_88:

(Start: 50 @65744 has 3 MA's), (77, 65639), (80, 65582), (82, 65573), (94, 65477), (98, 65465), (114, 65348), (115, 65336), (117, 65324), (119, 65306), (129, 65267),

Gene: Neos5_95 Start: 65988, Stop: 65500, Start Num: 68

Candidate Starts for Neos5_95:

(Start: 68 @65988 has 44 MA's), (75, 65949), (76, 65946), (80, 65871), (82, 65862), (90, 65820), (102, 65712), (109, 65670), (117, 65607), (119, 65589),

Gene: Nigel_85 Start: 65605, Stop: 65015, Start Num: 51

Candidate Starts for Nigel_85:

(21, 65845), (32, 65716), (Start: 51 @65605 has 7 MA's), (69, 65548), (75, 65512), (78, 65479), (80, 65434), (82, 65425), (91, 65353), (94, 65329), (107, 65236), (115, 65185), (117, 65173), (119, 65155), (124, 65128), (125, 65125), (127, 65113), (130, 65101), (145, 65050),

Gene: Nozo_96 Start: 66541, Stop: 66053, Start Num: 68

Candidate Starts for Nozo_96:

(Start: 68 @66541 has 44 MA's), (75, 66502), (76, 66499), (80, 66424), (82, 66415), (90, 66373), (102, 66265), (109, 66223), (117, 66160), (119, 66142),

Gene: Obutu_98 Start: 66345, Stop: 65857, Start Num: 68

Candidate Starts for Obutu_98:

(Start: 68 @66345 has 44 MA's), (75, 66306), (76, 66303), (80, 66228), (82, 66219), (90, 66177), (102, 66069), (109, 66027), (117, 65964), (119, 65946),

Gene: Olivio_96 Start: 65939, Stop: 65493, Start Num: 76

Candidate Starts for Olivio_96:

(Start: 68 @65981 has 44 MA's), (75, 65942), (76, 65939), (80, 65864), (82, 65855), (90, 65813), (102, 65705), (109, 65663), (117, 65600), (119, 65582),

Gene: Opia_85 Start: 63726, Stop: 63130, Start Num: 33

Candidate Starts for Opia_85:

(22, 63837), (Start: 33 @63726 has 18 MA's), (Start: 35 @63708 has 5 MA's), (Start: 44 @63660 has 12 MA's), (48, 63633), (56, 63606), (58, 63597), (70, 63555), (73, 63546), (80, 63450), (87, 63414), (94, 63342), (109, 63246), (110, 63240), (115, 63198), (117, 63186),

Gene: OrangeOswald_95 Start: 65776, Stop: 65288, Start Num: 68

Candidate Starts for OrangeOswald_95:

(Start: 68 @65776 has 44 MA's), (75, 65737), (76, 65734), (80, 65659), (82, 65650), (90, 65608), (102, 65500), (109, 65458), (117, 65395), (119, 65377),

Gene: PenguinLover67_87 Start: 65234, Stop: 64770, Start Num: 64

Candidate Starts for PenguinLover67_87:

(Start: 64 @65234 has 3 MA's), (67, 65225), (85, 65075), (87, 65072), (91, 65024), (98, 64988), (117, 64847), (119, 64829),

Gene: Phaedrus_91 Start: 65191, Stop: 64703, Start Num: 68

Candidate Starts for Phaedrus_91:

(Start: 68 @65191 has 44 MA's), (75, 65152), (76, 65149), (80, 65074), (82, 65065), (90, 65023), (102, 64915), (109, 64873), (117, 64810), (119, 64792),

Gene: Phantasmagoria_83 Start: 63643, Stop: 63113, Start Num: 44

Candidate Starts for Phantasmagoria_83:

(22, 63820), (Start: 33 @63709 has 18 MA's), (Start: 35 @63691 has 5 MA's), (Start: 44 @63643 has 12 MA's), (48, 63616), (56, 63589), (58, 63580), (70, 63538), (73, 63529), (80, 63433), (87, 63397), (94, 63325), (109, 63229), (110, 63223), (115, 63181), (117, 63169),

Gene: Phayeta_98 Start: 66026, Stop: 65538, Start Num: 68

Candidate Starts for Phayeta_98:

(Start: 68 @66026 has 44 MA's), (75, 65987), (76, 65984), (80, 65909), (82, 65900), (90, 65858), (102, 65750), (109, 65708), (117, 65645), (119, 65627),

Gene: Phelemich_86 Start: 65786, Stop: 65199, Start Num: 50

Candidate Starts for Phelemich_86:

(Start: 50 @65786 has 3 MA's), (80, 65621), (82, 65612), (94, 65516), (98, 65504), (114, 65387), (115, 65375), (117, 65363), (119, 65345), (129, 65306), (132, 65297),

Gene: Philly_95 Start: 65624, Stop: 65136, Start Num: 68

Candidate Starts for Philly_95:

(Start: 68 @65624 has 44 MA's), (75, 65585), (76, 65582), (80, 65507), (82, 65498), (90, 65456), (102, 65348), (109, 65306), (117, 65243), (119, 65225),

Gene: Phlyer_96 Start: 66486, Stop: 65998, Start Num: 68

Candidate Starts for Phlyer_96:

(Start: 68 @66486 has 44 MA's), (75, 66447), (76, 66444), (80, 66369), (82, 66360), (90, 66318), (102, 66210), (109, 66168), (117, 66105), (119, 66087),

Gene: Pipefish_95 Start: 66160, Stop: 65672, Start Num: 68

Candidate Starts for Pipefish_95:

(Start: 68 @66160 has 44 MA's), (75, 66121), (76, 66118), (80, 66043), (82, 66034), (90, 65992), (102, 65884), (109, 65842), (117, 65779), (119, 65761),

Gene: Pops_94 Start: 66731, Stop: 66201, Start Num: 54

Candidate Starts for Pops_94:

(Start: 54 @66731 has 1 MA's), (Start: 64 @66698 has 3 MA's), (80, 66572), (83, 66551), (87, 66539), (94, 66467), (112, 66353), (117, 66314), (119, 66296),

Gene: Poster_88 Start: 66222, Stop: 65554, Start Num: 40

Candidate Starts for Poster_88:

(5, 66984), (21, 66390), (24, 66327), (Start: 40 @66222 has 18 MA's), (Start: 51 @66171 has 7 MA's), (Start: 62 @66132 has 2 MA's), (75, 66081), (76, 66078), (78, 66048), (80, 66003), (82, 65994), (91, 65922), (94, 65898), (107, 65805), (115, 65754), (117, 65742), (119, 65724), (124, 65706), (125, 65703), (126, 65694), (127, 65691), (130, 65679), (135, 65655), (141, 65610), (143, 65598), (144, 65595),

Gene: Prince_90 Start: 67482, Stop: 66829, Start Num: 40

Candidate Starts for Prince_90:

(3, 68334), (21, 67650), (24, 67587), (Start: 40 @67482 has 18 MA's), (Start: 51 @67431 has 7 MA's), (75, 67338), (78, 67305), (80, 67260), (82, 67251), (91, 67179), (94, 67155), (107, 67062), (115, 67011), (117, 66999), (119, 66981), (124, 66963), (125, 66960), (130, 66936), (144, 66864), (146, 66861),

Gene: PrinceCharming_84 Start: 63736, Stop: 63158, Start Num: 35

Candidate Starts for PrinceCharming_84:

(22, 63865), (Start: 33 @63754 has 18 MA's), (Start: 35 @63736 has 5 MA's), (Start: 44 @63688 has 12 MA's), (48, 63661), (56, 63634), (58, 63625), (70, 63583), (73, 63574), (80, 63478), (87, 63442), (94, 63370), (109, 63274), (110, 63268), (115, 63226), (117, 63214),

Gene: QueenPie_82 Start: 65696, Stop: 65082, Start Num: 51

Candidate Starts for QueenPie_82:

(16, 66044), (17, 66041), (21, 65876), (Start: 51 @65696 has 7 MA's), (75, 65603), (78, 65570), (82, 65516), (85, 65495), (87, 65492), (98, 65408), (109, 65324), (115, 65276), (117, 65264), (119, 65246), (124, 65228), (125, 65225), (126, 65216), (127, 65213), (130, 65201), (135, 65177), (137, 65174), (141, 65138), (144, 65123),

Gene: Quesadilla_90 Start: 66835, Stop: 66329, Start Num: 52

Candidate Starts for Quesadilla_90:

(Start: 52 @66835 has 1 MA's), (65, 66787), (91, 66583), (92, 66580), (96, 66553), (109, 66463), (110, 66457), (117, 66406), (119, 66388), (122, 66370), (124, 66361),

Gene: Qyrzula_75 Start: 63848, Stop: 63252, Start Num: 33

Candidate Starts for Qyrzula_75:

(22, 63959), (Start: 33 @63848 has 18 MA's), (Start: 35 @63830 has 5 MA's), (Start: 44 @63782 has 12 MA's), (48, 63755), (56, 63728), (58, 63719), (70, 63677), (73, 63668), (80, 63572), (87, 63536), (94, 63464), (109, 63368), (110, 63362), (115, 63320), (117, 63308),

Gene: RagingRooster_96 Start: 65772, Stop: 65284, Start Num: 68

Candidate Starts for RagingRooster_96:

(Start: 68 @65772 has 44 MA's), (75, 65733), (76, 65730), (80, 65655), (82, 65646), (90, 65604), (102, 65496), (109, 65454), (117, 65391), (119, 65373),

Gene: RawrgerThat_88 Start: 66936, Stop: 66319, Start Num: 51

Candidate Starts for RawrgerThat_88:

(Start: 51 @66936 has 7 MA's), (60, 66900), (75, 66843), (82, 66756), (85, 66735), (87, 66732), (91, 66684), (93, 66672), (100, 66624), (103, 66597), (111, 66552), (115, 66516), (116, 66507), (119, 66486), (124, 66459), (130, 66432),

Gene: Reprobate_88 Start: 65791, Stop: 65204, Start Num: 50

Candidate Starts for Reprobate_88:

(Start: 50 @65791 has 3 MA's), (80, 65626), (82, 65617), (94, 65521), (98, 65509), (114, 65392), (115, 65380), (117, 65368), (119, 65350), (129, 65311), (132, 65302),

Gene: Rhinoforte_84 Start: 63745, Stop: 63149, Start Num: 33

Candidate Starts for Rhinoforte_84:

(22, 63856), (Start: 33 @63745 has 18 MA's), (Start: 35 @63727 has 5 MA's), (Start: 44 @63679 has 12 MA's), (48, 63652), (56, 63625), (58, 63616), (70, 63574), (73, 63565), (80, 63469), (87, 63433), (94, 63361), (109, 63265), (110, 63259), (115, 63217), (117, 63205),

Gene: Rinkes_86 Start: 67114, Stop: 66665, Start Num: 57

Candidate Starts for Rinkes_86:

(Start: 57 @67114 has 1 MA's), (87, 66943), (89, 66940), (91, 66895), (105, 66772), (111, 66751), (113, 66742), (117, 66706),

Gene: Rita130_88 Start: 65916, Stop: 65299, Start Num: 50

Candidate Starts for Rita130_88:

(2, 66870), (10, 66375), (27, 66045), (Start: 36 @65991 has 3 MA's), (Start: 50 @65916 has 3 MA's), (80, 65745), (82, 65736), (98, 65628), (114, 65511), (117, 65487), (119, 65469), (129, 65433), (142, 65352),

Gene: Rita1961_97 Start: 66117, Stop: 65629, Start Num: 68

Candidate Starts for Rita1961_97:

(Start: 68 @66117 has 44 MA's), (75, 66078), (76, 66075), (80, 66000), (82, 65991), (90, 65949), (102, 65841), (109, 65799), (117, 65736), (119, 65718),

Gene: Robyn_98 Start: 67147, Stop: 66548, Start Num: 35

Candidate Starts for Robyn_98:

(Start: 35 @67147 has 5 MA's), (37, 67126), (Start: 54 @67087 has 1 MA's), (Start: 64 @67045 has 3 MA's), (80, 66919), (83, 66898), (87, 66886), (94, 66814), (112, 66700), (117, 66661), (119, 66643),

Gene: RomaT_96 Start: 66340, Stop: 65852, Start Num: 68

Candidate Starts for RomaT_96:

(Start: 68 @66340 has 44 MA's), (75, 66301), (76, 66298), (80, 66223), (82, 66214), (90, 66172), (102, 66064), (109, 66022), (117, 65959), (119, 65941),

Gene: Roscoe_95 Start: 67027, Stop: 66401, Start Num: 35

Candidate Starts for Roscoe_95:

(20, 67246), (23, 67144), (Start: 35 @67027 has 5 MA's), (Start: 45 @66979 has 5 MA's), (Start: 54 @66940 has 1 MA's), (Start: 64 @66898 has 3 MA's), (80, 66772), (83, 66751), (87, 66739), (94, 66667), (112, 66553), (117, 66514), (119, 66496),

Gene: Rosebush_82 Start: 63817, Stop: 63221, Start Num: 33

Candidate Starts for Rosebush_82:

(22, 63928), (Start: 33 @63817 has 18 MA's), (Start: 35 @63799 has 5 MA's), (Start: 44 @63751 has 12 MA's), (48, 63724), (58, 63688), (70, 63646), (73, 63637), (80, 63541), (87, 63505), (94, 63433), (109, 63337), (110, 63331), (115, 63289), (117, 63277),

Gene: Sabella_84 Start: 63653, Stop: 63057, Start Num: 33

Candidate Starts for Sabella_84:

(22, 63764), (Start: 33 @63653 has 18 MA's), (Start: 35 @63635 has 5 MA's), (Start: 44 @63587 has 12 MA's), (48, 63560), (56, 63533), (58, 63524), (70, 63482), (73, 63473), (80, 63377), (87, 63341), (94, 63269), (109, 63173), (110, 63167), (115, 63125), (117, 63113),

Gene: Saguaro_82 Start: 64421, Stop: 63921, Start Num: 64

Candidate Starts for Saguaro_82:

(Start: 64 @64421 has 3 MA's), (87, 64265), (94, 64196), (98, 64184), (107, 64103), (117, 64043), (122, 64007), (123, 64004), (128, 63980), (129, 63974),

Gene: Serendipitous_89 Start: 65633, Stop: 65031, Start Num: 50

Candidate Starts for Serendipitous_89:

(Start: 50 @65633 has 3 MA's), (80, 65468), (84, 65444), (90, 65420), (98, 65354), (107, 65273), (109, 65270), (117, 65213), (119, 65195),

Gene: Shenandoah_96 Start: 65692, Stop: 65204, Start Num: 68

Candidate Starts for Shenandoah_96:

(Start: 68 @65692 has 44 MA's), (75, 65653), (76, 65650), (80, 65575), (82, 65566), (90, 65524), (102, 65416), (109, 65374), (117, 65311), (119, 65293),

Gene: Shenyu_90 Start: 66352, Stop: 65735, Start Num: 50

Candidate Starts for Shenyu_90:

(10, 66787), (27, 66457), (Start: 50 @66352 has 3 MA's), (80, 66184), (82, 66175), (98, 66067), (114, 65950), (117, 65926), (119, 65908), (138, 65815),

Gene: SirJeffery_87 Start: 65697, Stop: 65122, Start Num: 50

Candidate Starts for SirJeffery_87:

(31, 65790), (Start: 40 @65748 has 18 MA's), (Start: 50 @65697 has 3 MA's), (80, 65532), (82, 65523), (98, 65415), (114, 65298), (117, 65274), (119, 65256), (129, 65220),

Gene: SlippinJimmy_99 Start: 67140, Stop: 66652, Start Num: 68

Candidate Starts for SlippinJimmy_99:

(Start: 68 @67140 has 44 MA's), (75, 67101), (76, 67098), (80, 67023), (82, 67014), (90, 66972), (102, 66864), (109, 66822), (117, 66759), (119, 66741),

Gene: Stinger_87 Start: 65601, Stop: 64981, Start Num: 51

Candidate Starts for Stinger_87:

(Start: 51 @65601 has 7 MA's), (59, 65568), (69, 65541), (77, 65484), (78, 65472), (82, 65418), (84, 65400), (94, 65322), (115, 65178), (117, 65166), (119, 65148), (130, 65094),

Gene: StinkyVeggy_87 Start: 65724, Stop: 65134, Start Num: 50

Candidate Starts for StinkyVeggy_87:

(26, 65826), (28, 65814), (Start: 35 @65796 has 5 MA's), (Start: 50 @65724 has 3 MA's), (80, 65550), (82, 65541), (98, 65433), (114, 65316), (117, 65292), (119, 65274), (132, 65217),

Gene: Suigeneris_90 Start: 66233, Stop: 65547, Start Num: 36

Candidate Starts for Suigeneris_90:

(2, 67112), (10, 66617), (27, 66287), (Start: 36 @66233 has 3 MA's), (Start: 50 @66158 has 3 MA's), (80, 65993), (82, 65984), (98, 65876), (114, 65759), (117, 65735), (119, 65717), (129, 65681), (142, 65600),

Gene: SwainyDoc_96 Start: 66206, Stop: 65718, Start Num: 68

Candidate Starts for SwainyDoc_96:

(Start: 68 @66206 has 44 MA's), (75, 66167), (76, 66164), (80, 66089), (82, 66080), (90, 66038), (102, 65930), (109, 65888), (117, 65825), (119, 65807),

Gene: SynergyX_97 Start: 66082, Stop: 65594, Start Num: 68

Candidate Starts for SynergyX_97:

(Start: 68 @66082 has 44 MA's), (75, 66043), (76, 66040), (80, 65965), (82, 65956), (90, 65914), (102, 65806), (109, 65764), (117, 65701), (119, 65683),

Gene: TA17A_87 Start: 63660, Stop: 63064, Start Num: 33

Candidate Starts for TA17A_87:

(22, 63771), (Start: 33 @63660 has 18 MA's), (Start: 35 @63642 has 5 MA's), (Start: 44 @63594 has 12 MA's), (48, 63567), (58, 63531), (70, 63489), (73, 63480), (80, 63384), (87, 63348), (94, 63276), (109, 63180), (110, 63174), (115, 63132), (117, 63120),

Gene: Tinciduntolum_85 Start: 63824, Stop: 63228, Start Num: 33

Candidate Starts for Tinciduntolum_85:

(22, 63935), (Start: 33 @63824 has 18 MA's), (Start: 35 @63806 has 5 MA's), (Start: 44 @63758 has 12 MA's), (48, 63731), (56, 63704), (58, 63695), (70, 63653), (73, 63644), (80, 63548), (87, 63512), (94, 63440), (109, 63344), (110, 63338), (115, 63296), (117, 63284),

Gene: TinyTerror_97 Start: 66203, Stop: 65715, Start Num: 68

Candidate Starts for TinyTerror_97:

(Start: 68 @66203 has 44 MA's), (75, 66164), (76, 66161), (80, 66086), (82, 66077), (90, 66035), (102, 65927), (109, 65885), (117, 65822), (119, 65804),

Gene: Tres_84 Start: 63660, Stop: 63079, Start Num: 35

Candidate Starts for Tres_84:

(22, 63789), (Start: 33 @63678 has 18 MA's), (Start: 35 @63660 has 5 MA's), (Start: 44 @63609 has 12 MA's), (48, 63582), (56, 63555), (58, 63546), (70, 63504), (73, 63495), (80, 63399), (87, 63363), (94, 63291), (109, 63195), (110, 63189), (115, 63147), (117, 63135),

Gene: Tydolla_92 Start: 65758, Stop: 65270, Start Num: 68

Candidate Starts for Tydolla_92:

(Start: 68 @65758 has 44 MA's), (75, 65719), (76, 65716), (80, 65641), (82, 65632), (90, 65590), (102, 65482), (109, 65440), (117, 65377), (119, 65359),

Gene: Vaishali24_97 Start: 66820, Stop: 66230, Start Num: 35

Candidate Starts for Vaishali24_97:

(20, 67039), (23, 66937), (Start: 35 @66820 has 5 MA's), (37, 66799), (Start: 54 @66760 has 1 MA's), (Start: 64 @66727 has 3 MA's), (80, 66601), (83, 66580), (87, 66568), (94, 66496), (112, 66382), (117, 66343), (119, 66325),

Gene: Vic9_00082 Start: 64144, Stop: 63614, Start Num: 44

Candidate Starts for Vic9_00082:

(4, 64978), (7, 64726), (12, 64546), (19, 64417), (Start: 29 @64222 has 1 MA's), (Start: 44 @64144 has 12 MA's), (48, 64117), (56, 64090), (58, 64081), (70, 64039), (73, 64030), (80, 63934), (87, 63898), (94, 63826), (109, 63730), (110, 63724), (115, 63682), (117, 63670),

Gene: Vincenzo_89 Start: 68034, Stop: 67441, Start Num: 51

Candidate Starts for Vincenzo_89:

(Start: 51 @68034 has 7 MA's), (75, 67941), (78, 67908), (87, 67830), (91, 67782), (98, 67746), (101, 67707), (107, 67665), (115, 67614), (117, 67602), (119, 67584), (125, 67554), (127, 67542), (130, 67530), (133, 67521),

Gene: VioletZ_92 Start: 67510, Stop: 66836, Start Num: 40

Candidate Starts for VioletZ_92:

(9, 67930), (21, 67678), (24, 67615), (Start: 40 @67510 has 18 MA's), (Start: 51 @67459 has 7 MA's), (75, 67363), (76, 67360), (78, 67330), (80, 67285), (82, 67276), (91, 67204), (94, 67180), (107, 67087), (115, 67036), (117, 67024), (119, 67006), (120, 67003), (124, 66988), (125, 66985), (127, 66973), (130, 66961), (135, 66937), (143, 66880), (144, 66877),

Gene: Vivaldi_97 Start: 67032, Stop: 66454, Start Num: 45

Candidate Starts for Vivaldi_97:

(Start: 45 @67032 has 5 MA's), (Start: 54 @66993 has 1 MA's), (Start: 64 @66951 has 3 MA's), (80, 66825), (83, 66804), (87, 66792), (94, 66720), (112, 66606), (117, 66567), (119, 66549),

Gene: Waleliano_89 Start: 67237, Stop: 66587, Start Num: 40

Candidate Starts for Waleliano_89:

(21, 67405), (24, 67342), (Start: 40 @67237 has 18 MA's), (Start: 51 @67186 has 7 MA's), (75, 67096), (80, 67018), (82, 67009), (94, 66913), (107, 66820), (115, 66769), (117, 66757), (119, 66739), (124, 66721), (125, 66718), (130, 66694), (135, 66670), (144, 66622),

Gene: West99_84 Start: 63829, Stop: 63251, Start Num: 35

Candidate Starts for West99_84:

(22, 63958), (Start: 33 @63847 has 18 MA's), (Start: 35 @63829 has 5 MA's), (Start: 44 @63781 has 12 MA's), (48, 63754), (56, 63727), (58, 63718), (70, 63676), (73, 63667), (80, 63571), (87, 63535), (94, 63463), (109, 63367), (110, 63361), (115, 63319), (117, 63307),

Gene: Xincheng_82 Start: 67236, Stop: 66616, Start Num: 51

Candidate Starts for Xincheng_82:

(21, 67455), (24, 67392), (Start: 40 @67287 has 18 MA's), (Start: 51 @67236 has 7 MA's), (75, 67146), (87, 67032), (91, 66984), (94, 66960), (99, 66936), (100, 66924), (107, 66867), (115, 66816), (117, 66804), (119, 66786), (124, 66768), (125, 66765), (127, 66753), (130, 66741), (135, 66717), (143, 66663), (144, 66660),

Gene: Yahalom_94 Start: 65583, Stop: 65095, Start Num: 68

Candidate Starts for Yahalom_94:

(Start: 68 @65583 has 44 MA's), (75, 65544), (76, 65541), (80, 65466), (82, 65457), (90, 65415), (102, 65307), (109, 65265), (117, 65202), (119, 65184),

Gene: Yinz_94 Start: 65180, Stop: 64692, Start Num: 68

Candidate Starts for Yinz_94:

(25, 65402), (41, 65300), (Start: 68 @65180 has 44 MA's), (75, 65141), (76, 65138), (80, 65063), (82, 65054), (90, 65012), (102, 64904), (109, 64862), (117, 64799), (119, 64781),

Gene: Zemanar_88 Start: 67185, Stop: 66517, Start Num: 40

Candidate Starts for Zemanar_88:

(21, 67353), (24, 67290), (Start: 40 @67185 has 18 MA's), (Start: 51 @67134 has 7 MA's), (75, 67044), (80, 66966), (82, 66957), (91, 66885), (94, 66861), (107, 66768), (115, 66717), (117, 66705), (119, 66687), (124, 66669), (125, 66666), (127, 66654), (130, 66642), (135, 66618), (141, 66573), (143, 66561), (144, 66558),

Gene: Zenteno07_105 Start: 69900, Stop: 69328, Start Num: 39

Candidate Starts for Zenteno07_105:

(13, 70275), (Start: 39 @69900 has 1 MA's), (Start: 53 @69834 has 2 MA's), (63, 69792), (72, 69762), (87, 69633), (90, 69615), (94, 69558), (97, 69549), (117, 69399), (118, 69384),