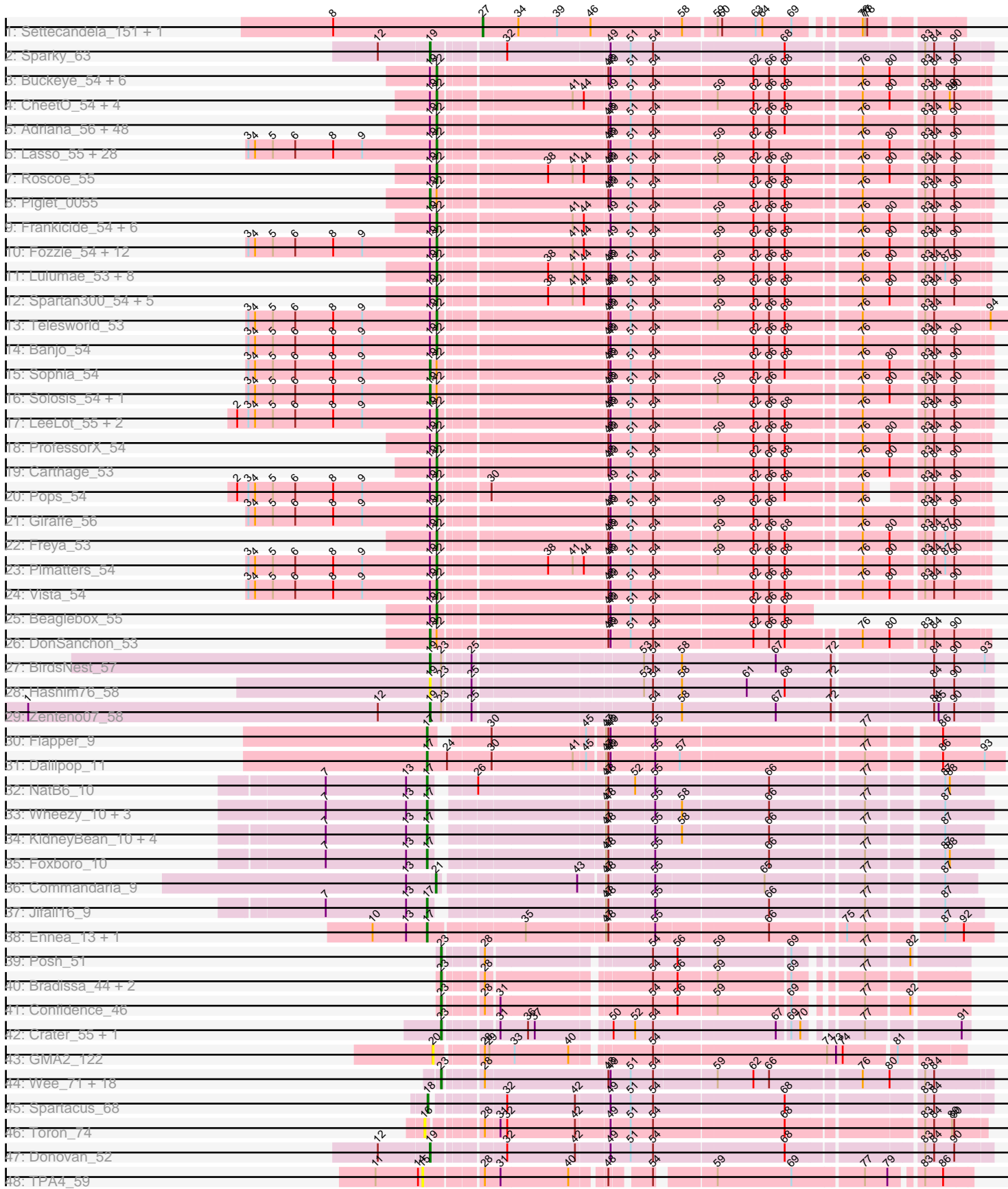


Pham 196300



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 196300 Report

This analysis was run 12/09/24 on database version 580.

Pham number 196300 has 198 members, 9 are drafts.

Phages represented in each track:

- Track 1 : Settecandela_151, Phrappuccino_151
- Track 2 : Sparky_63
- Track 3 : Buckeye_54, SilverBell_54, UncleHowie_54, Murdoc_54, PinheadLarry_56, Matalotodo_54, Pipsqueak_54
- Track 4 : CheetO_54, Schadenfreude_54, KlimbOn_54, Crownjwl_55, AbsoluteMadLad_54
- Track 5 : Adriana_56, Thora_55, Morty_56, Samaymay_55, CamL_55, ABU_56, Serpentine_0055, Soile_56, Hamish_54, Chaelin_56, Mulan_55, Cher_55, Nacho_0056, Bishoperium_55, ThreeOh3D2_56, Brilliant_57, Windsor_55, Mecca_55, Megatron_56, Kahve_55, QueenBeane_55, Usavi_55, Weher20_55, Omniscient_56, Dati_55, Eugenia_55, IsaacEli_56, Vaticameos_52, PhatCats2014_56, Lego3393_54, Placalicious_55, Kimbrough_56, Badfish_56, HenryJackson_55, FugateOSU_55, Gareth_55, Oosterbaan_55, Jillium_55, PG1_56, Hertubise_55, Etaye_55, Haimas_54, Waterdiva_55, Bluephacebaby_55, Gwilliam_57, Melc17_55, KingTut_47, Kikipoo_56, Tomlarah_56
- Track 6 : Lasso_55, Squid_55, Daffy_55, Haleema_54, MrPhizzler_56, DaddyDaniels_57, Held_55, Mosaic_54, Grand2040_55, MRabcd_54, Potter_54, SassyCat97_54, Vortex_55, Mana_54, MitKao_55, Timmi_54, Chorkpop_55, Serendipity_55, Childish_55, Puhltonio_55, Cosmolli16_56, TomBombadil_55, Craff_58, TallGrassMM_55, Maru_55, Morgushi_55, Surely_55, Cannibal_55, Kwadwo_54
- Track 7 : Roscoe_55
- Track 8 : Piglet_0055
- Track 9 : Frankicide_54, Eremos_54, Basato_55, Horchata_54, Aelin_54, HSavage_54, OliverWalter_54
- Track 10 : Fozzie_54, Harvey_54, Inverness_54, Mesh1_56, UAch1_54, Vaishali24_53, Antonia_54, OSmaximus_56, Manad_54, Hetaeria_54, Cornobble_54, Newman_54, Robyn_54
- Track 11 : Lulumae_53, Altwerkus_53, Phunky_54, DoesntMatter_53, Roy17_54, LuckyMarjie_53, Dione_53, Phareon_54, Numberten_54
- Track 12 : Spartan300_54, Valjean_54, Boehler_54, Zaider_55, Olive_54, EmpTee_54
- Track 13 : Telesworld_53
- Track 14 : Banjo_54
- Track 15 : Sophia_54
- Track 16 : Solosis_54, Xavier_54
- Track 17 : LeeLot_55, JDog_54, Zelda_55

- Track 18 : ProfessorX_54
- Track 19 : Carthage_53
- Track 20 : Pops_54
- Track 21 : Giraffe_56
- Track 22 : Freya_53
- Track 23 : Plmatters_54
- Track 24 : Vista_54
- Track 25 : Beaglebox_55
- Track 26 : DonSanchon_53
- Track 27 : BirdsNest_57
- Track 28 : Hashim76_58
- Track 29 : Zenteno07_58
- Track 30 : Flapper_9
- Track 31 : Dalilpop_11
- Track 32 : NatB6_10
- Track 33 : Wheezy_10, Arti_10, GrootJr_12, NovumRegina_10
- Track 34 : KidneyBean_10, Tracker_10, Phomeo_9, Emianna_10, Kurt_10
- Track 35 : Foxboro_10
- Track 36 : Commandaria_9
- Track 37 : Jifall16_9
- Track 38 : Ennea_13, Lollipop1437_12
- Track 39 : Posh_51
- Track 40 : Bradissa_44, EnalisNailo_43, Lilas_46
- Track 41 : Confidence_46
- Track 42 : Crater_55, Apricot_55
- Track 43 : GMA2_122
- Track 44 : Wee_71, WillSterrel_67, Ogopogo_73, TDanisky_73, UncleRicky_65, Doomphist_66, Poenanya_66, Enby_67, Oksu_71, Llij_62, Lorde_66, Fruitloop_61, Tootsieroll_66, DirtMcgirt_65, Phatniss_64, Drago_63, Sparkdehlily_73, IrishSherpFalk_67, Taj_71
- Track 45 : Spartacus_68
- Track 46 : Toron_74
- Track 47 : Donovan_52
- Track 48 : TPA4_59

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

The start number called the most often in the published annotations is 22, it was called in 136 of the 189 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- ABU_56, AbsoluteMadLad_54, Adriana_56, Aelin_54, Altwerkus_53, Antonia_54, Badfish_56, Banjo_54, Basato_55, Beaglebox_55, Bishoperium_55, Bluephacebaby_55, Boehler_54, Brilliant_57, Buckeye_54, CamL_55, Cannibal_55, Carthage_53, Chaelin_56, CheetO_54, Cher_55, Childish_55, Chorkpop_55, Cornobble_54, Cosmolli16_56, Craff_58, Crownjwl_55, DaddyDaniels_57, Daffy_55, Dati_55, Dione_53, DoesntMatter_53, EmpTee_54, Eremos_54, Etaye_55, Eugenia_55, Fozzie_54, Frankicide_54, Freya_53, FugateOSU_55, Gareth_55, Giraffe_56, Grand2040_55, Gwilliam_57, HSavage_54, Haimas_54, Haleema_54, Hamish_54, Harvey_54, Held_55, HenryJackson_55, Hertubise_55, Hetaeria_54,

Horchata_54, Inverness_54, IsaacEli_56, JDog_54, Jillium_55, Kahve_55, Kikipoo_56, Kimbrough_56, KingTut_47, KlimbOn_54, Kwadwo_54, Lasso_55, LeeLot_55, Lego3393_54, LuckyMarjie_53, Lulumae_53, MRabcd_54, Mana_54, Manad_54, Maru_55, Matalotodo_54, Mecca_55, Megatron_56, Melc17_55, Mesh1_56, MitKao_55, Morgushi_55, Morty_56, Mosaic_54, MrPhizzler_56, Mulan_55, Murdoc_54, Nacho_0056, Newman_54, Numberten_54, OSmaximus_56, Olive_54, OliverWalter_54, Omniscient_56, Oosterbaan_55, PG1_56, Phareon_54, PhatCats2014_56, Phunky_54, PinheadLarry_56, Pipsqueak_54, Placalicious_55, Plmatters_54, Pops_54, Potter_54, ProfessorX_54, Puhltonio_55, QueenBeane_55, Robyn_54, Roscoe_55, Roy17_54, Samaymay_55, SassyCat97_54, Schadenfreude_54, Serendipity_55, Serpentine_0055, SilverBell_54, Soile_56, Spartan300_54, Squid_55, Surely_55, TallGrassMM_55, Telesworld_53, Thora_55, ThreeOh3D2_56, Timmi_54, TomBombadil_55, Tomlarah_56, UAch1_54, UncleHowie_54, Usavi_55, Vaishali24_53, Valjean_54, Vaticameos_52, Vista_54, Vortex_55, Waterdiva_55, Weher20_55, Windsor_55, Zaider_55, Zelda_55,

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

- DonSanchon_53, Piglet_0055, Solosis_54, Sophia_54, Xavier_54,

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

- Apricot_55, Arti_10, BirdsNest_57, Bradissa_44, Commandaria_9, Confidence_46, Crater_55, Dalilpop_11, DirtMcgirt_65, Donovan_52, Doomphist_66, Drago_63, Emianna_10, EnalisNailo_43, Enby_67, Ennea_13, Flapper_9, Foxboro_10, Fruitloop_61, GMA2_122, GrootJr_12, Hashim76_58, IrishSherpFalk_67, Jifall16_9, KidneyBean_10, Kurt_10, Lilas_46, Llij_62, Lollipop1437_12, Lorde_66, NatB6_10, NovumRegina_10, Ogopogo_73, Oksu_71, Phatniss_64, Phomeo_9, Phrappuccino_151, Poenanya_66, Posh_51, Settecandela_151, Sparkdehlily_73, Sparky_63, Spartacus_68, TDanisky_73, TPA4_59, Taj_71, Tootsieroll_66, Toron_74, Tracker_10, UncleRicky_65, Wee_71, Wheezy_10, WillSterrel_67, Zenteno07_58,

Summary by start number:

Start 15:

- Found in 1 of 198 (0.5%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: TPA4_59 (singleton),

Start 16:

- Found in 1 of 198 (0.5%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Toron_74 (F6),

Start 17:

- Found in 16 of 198 (8.1%) of genes in pham
- Manual Annotations of this start: 15 of 189
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Arti_10 (CR2), Dalilpop_11 (CR1), Emianna_10 (CR2), Ennea_13 (CR3), Flapper_9 (CR1), Foxboro_10 (CR2), GrootJr_12 (CR2), Jifall16_9 (CR2), KidneyBean_10 (CR2), Kurt_10 (CR2), Lollipop1437_12 (CR3), NatB6_10 (CR2), NovumRegina_10 (CR2), Phomeo_9

(CR2), Tracker_10 (CR2), Wheezy_10 (CR2),

Start 18:

- Found in 1 of 198 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 189
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Spartacus_68 (F1),

Start 19:

- Found in 149 of 198 (75.3%) of genes in pham
- Manual Annotations of this start: 9 of 189
- Called 6.7% of time when present
- Phage (with cluster) where this start called: BirdsNest_57 (B13), DonSanchon_53 (B1), Donovan_52 (P1), Hashim76_58 (B13), Piglet_0055 (B1), Solosis_54 (B1), Sophia_54 (B1), Sparky_63 (AF), Xavier_54 (B1), Zenteno07_58 (B13),

Start 20:

- Found in 1 of 198 (0.5%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: GMA2_122 (DS),

Start 21:

- Found in 1 of 198 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 189
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Commandaria_9 (CR2),

Start 22:

- Found in 144 of 198 (72.7%) of genes in pham
- Manual Annotations of this start: 136 of 189
- Called 96.5% of time when present
- Phage (with cluster) where this start called: ABU_56 (B1), AbsoluteMadLad_54 (B1), Adriana_56 (B1), Aelin_54 (B1), Altwerkus_53 (B1), Antonia_54 (B1), Badfish_56 (B1), Banjo_54 (B1), Basato_55 (B1), Beaglebox_55 (B1), Bishoperium_55 (B1), Bluephacebaby_55 (B1), Boehler_54 (B1), Brilliant_57 (B1), Buckeye_54 (B1), CamL_55 (B1), Cannibal_55 (B1), Carthage_53 (B1), Chaelin_56 (B1), CheetO_54 (B1), Cher_55 (B1), Childish_55 (B1), Chorkpop_55 (B1), Cornobble_54 (B1), Cosmolli16_56 (B1), Craff_58 (B1), Crownjwl_55 (B1), DaddyDaniels_57 (B1), Daffy_55 (B1), Dati_55 (B1), Dione_53 (B1), DoesntMatter_53 (B1), EmpTee_54 (B1), Eremos_54 (B1), Etaye_55 (B1), Eugenia_55 (B1), Fozzie_54 (B1), Frankicide_54 (B1), Freya_53 (B1), FugateOSU_55 (B1), Gareth_55 (B1), Giraffe_56 (B1), Grand2040_55 (B1), Gwilliam_57 (B1), HSavage_54 (B1), Haimas_54 (B1), Haleema_54 (B1), Hamish_54 (B1), Harvey_54 (B1), Held_55 (B1), HenryJackson_55 (B1), Hertubise_55 (B1), Hetaeria_54 (B1), Horchata_54 (B1), Inverness_54 (B1), IsaacEli_56 (B1), JDog_54 (B1), Jillium_55 (B1), Kahve_55 (B1), Kikipoo_56 (B1), Kimbrough_56 (B1), KingTut_47 (B1), KlimbOn_54 (B1), Kwadwo_54 (B1), Lasso_55 (B1), LeeLot_55 (B1), Lego3393_54 (B1), LuckyMarjie_53 (B1), Lulumae_53 (B1), MRabcd_54 (B1), Mana_54 (B1), Manad_54 (B1), Maru_55 (B1), Matalotodo_54 (B1), Mecca_55 (B1), Megatron_56 (B1), Melc17_55 (B1), Mesh1_56 (B1), MitKao_55 (B1), Morgushi_55 (B1), Morty_56 (B1), Mosaic_54 (B1), MrPhizzler_56 (B1), Mulan_55 (B1), Murdoc_54 (B1), Nacho_0056 (B1), Newman_54 (B1), Numberten_54 (B1),

OSmaximus_56 (B1), Olive_54 (B1), OliverWalter_54 (B1), Omniscient_56 (B1), Oosterbaan_55 (B1), PG1_56 (B1), Phareon_54 (B1), PhatCats2014_56 (B1), Phunky_54 (B1), PinheadLarry_56 (B1), Pipsqueak_54 (B1), Placalicious_55 (B1), Plmatters_54 (B1), Pops_54 (B1), Potter_54 (B1), ProfessorX_54 (B1), Puhltonio_55 (B1), QueenBeane_55 (B1), Robyn_54 (B1), Roscoe_55 (B1), Roy17_54 (B1), Samaymay_55 (B1), SassyCat97_54 (B1), Schadenfreude_54 (B1), Serendipity_55 (B1), Serpentine_0055 (B1), SilverBell_54 (B1), Soile_56 (B1), Spartan300_54 (B1), Squid_55 (B1), Surely_55 (B1), TallGrassMM_55 (B1), Telesworld_53 (B1), Thora_55 (B1), ThreeOh3D2_56 (B1), Timmi_54 (B1), TomBombadil_55 (B1), Tomlarah_56 (B1), UAch1_54 (B1), UncleHowie_54 (B1), Usavi_55 (B1), Vaishali24_53 (B1), Valjean_54 (B1), Vaticameos_52 (B1), Vista_54 (B1), Vortex_55 (B1), Waterdiva_55 (B1), Weher20_55 (B1), Windsor_55 (B1), Zaider_55 (B1), Zelda_55 (B1),

Start 23:

- Found in 29 of 198 (14.6%) of genes in pham
- Manual Annotations of this start: 25 of 189
- Called 89.7% of time when present
- Phage (with cluster) where this start called: Apricot_55 (DN3), Bradissa_44 (CY1), Confidence_46 (CY1), Crater_55 (DN3), DirtMcgirt_65 (F1), Doomphist_66 (F1), Drago_63 (F1), EnalisNailo_43 (CY1), Enby_67 (F1), Fruitloop_61 (F1), IrishSherpFalk_67 (F1), Lilas_46 (CY1), Llij_62 (F1), Lorde_66 (F1), Ogopogo_73 (F1), Oksu_71 (F1), Phatniss_64 (F1), Poenanya_66 (F1), Posh_51 (CY), Sparkdehlily_73 (F1), TDanisky_73 (F1), Taj_71 (F1), Tootsieroll_66 (F1), UncleRicky_65 (F1), Wee_71 (F1), WillSterrel_67 (F1),

Start 27:

- Found in 2 of 198 (1.0%) of genes in pham
- Manual Annotations of this start: 2 of 189
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Phrappuccino_151 (AA), Settecandela_151 (AA),

Summary by clusters:

There are 15 clusters represented in this pham: CR2, F1, CY1, CR1, AA, F6, AF, CR3, singleton, CY, P1, B13, DN3, DS, B1,

Info for manual annotations of cluster AA:

- Start number 27 was manually annotated 2 times for cluster AA.

Info for manual annotations of cluster AF:

- Start number 19 was manually annotated 1 time for cluster AF.

Info for manual annotations of cluster B1:

- Start number 19 was manually annotated 5 times for cluster B1.
- Start number 22 was manually annotated 136 times for cluster B1.

Info for manual annotations of cluster B13:

- Start number 19 was manually annotated 2 times for cluster B13.

Info for manual annotations of cluster CR1:

- Start number 17 was manually annotated 2 times for cluster CR1.

Info for manual annotations of cluster CR2:

- Start number 17 was manually annotated 11 times for cluster CR2.
- Start number 21 was manually annotated 1 time for cluster CR2.

Info for manual annotations of cluster CR3:

- Start number 17 was manually annotated 2 times for cluster CR3.

Info for manual annotations of cluster CY:

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

Info for manual annotations of cluster CY1:

- Start number 23 was manually annotated 4 times for cluster CY1.

Info for manual annotations of cluster DN3:

- Start number 23 was manually annotated 2 times for cluster DN3.

Info for manual annotations of cluster F1:

- Start number 18 was manually annotated 1 time for cluster F1.
- Start number 23 was manually annotated 18 times for cluster F1.

Info for manual annotations of cluster P1:

- Start number 19 was manually annotated 1 time for cluster P1.

Gene Information:

Gene: ABU_56 Start: 48493, Stop: 47813, Start Num: 22

Candidate Starts for ABU_56:

(Start: 19 @48502 has 9 MA's), (Start: 22 @48493 has 136 MA's), (48, 48286), (49, 48283), (51, 48259), (54, 48229), (62, 48103), (66, 48082), (68, 48061), (76, 47971), (83, 47896), (84, 47884), (90, 47857),

Gene: AbsoluteMadLad_54 Start: 48205, Stop: 47528, Start Num: 22

Candidate Starts for AbsoluteMadLad_54:

(Start: 19 @48214 has 9 MA's), (Start: 22 @48205 has 136 MA's), (41, 48043), (44, 48028), (49, 47995), (51, 47971), (54, 47941), (59, 47863), (62, 47815), (66, 47794), (68, 47773), (76, 47683), (80, 47647), (83, 47608), (84, 47596), (88, 47575), (90, 47569),

Gene: Adriana_56 Start: 48490, Stop: 47810, Start Num: 22

Candidate Starts for Adriana_56:

(Start: 19 @48499 has 9 MA's), (Start: 22 @48490 has 136 MA's), (48, 48283), (49, 48280), (51, 48256), (54, 48226), (62, 48100), (66, 48079), (68, 48058), (76, 47968), (83, 47893), (84, 47881), (90, 47854),

Gene: Aelin_54 Start: 47769, Stop: 47092, Start Num: 22

Candidate Starts for Aelin_54:

(Start: 19 @47778 has 9 MA's), (Start: 22 @47769 has 136 MA's), (41, 47607), (44, 47592), (49, 47559), (51, 47535), (54, 47505), (59, 47427), (62, 47379), (66, 47358), (68, 47337), (76, 47247), (80, 47211), (83, 47172), (84, 47160), (90, 47133),

Gene: Altwerkus_53 Start: 47657, Stop: 46980, Start Num: 22

Candidate Starts for Altwerkus_53:

(Start: 19 @47666 has 9 MA's), (Start: 22 @47657 has 136 MA's), (38, 47528), (41, 47495), (44, 47480), (48, 47450), (49, 47447), (51, 47423), (54, 47393), (59, 47315), (62, 47267), (66, 47246), (68, 47225), (76, 47135), (80, 47099), (83, 47060), (84, 47048), (87, 47033), (90, 47021),

Gene: Antonia_54 Start: 47769, Stop: 47092, Start Num: 22

Candidate Starts for Antonia_54:

(3, 48021), (4, 48012), (5, 47988), (6, 47958), (8, 47907), (9, 47868), (Start: 19 @47778 has 9 MA's), (Start: 22 @47769 has 136 MA's), (41, 47607), (44, 47592), (49, 47559), (51, 47535), (54, 47505), (59, 47427), (62, 47379), (66, 47358), (68, 47337), (76, 47247), (80, 47211), (83, 47172), (84, 47160), (90, 47133),

Gene: Apricot_55 Start: 35565, Stop: 36167, Start Num: 23

Candidate Starts for Apricot_55:

(Start: 23 @35565 has 25 MA's), (31, 35622), (36, 35658), (37, 35667), (50, 35751), (52, 35778), (54, 35802), (67, 35958), (69, 35973), (70, 35985), (77, 36042), (91, 36156),

Gene: Arti_10 Start: 5991, Stop: 6665, Start Num: 17

Candidate Starts for Arti_10:

(7, 5856), (13, 5964), (Start: 17 @5991 has 15 MA's), (47, 6192), (48, 6195), (55, 6252), (58, 6285), (66, 6396), (77, 6513), (87, 6603),

Gene: Badfish_56 Start: 48515, Stop: 47835, Start Num: 22

Candidate Starts for Badfish_56:

(Start: 19 @48524 has 9 MA's), (Start: 22 @48515 has 136 MA's), (48, 48308), (49, 48305), (51, 48281), (54, 48251), (62, 48125), (66, 48104), (68, 48083), (76, 47993), (83, 47918), (84, 47906), (90, 47879),

Gene: Banjo_54 Start: 47962, Stop: 47282, Start Num: 22

Candidate Starts for Banjo_54:

(3, 48214), (4, 48205), (5, 48181), (6, 48151), (8, 48100), (9, 48061), (Start: 19 @47971 has 9 MA's), (Start: 22 @47962 has 136 MA's), (48, 47755), (49, 47752), (51, 47728), (54, 47698), (62, 47572), (66, 47551), (68, 47530), (76, 47440), (83, 47365), (84, 47353), (90, 47326),

Gene: Basato_55 Start: 48237, Stop: 47560, Start Num: 22

Candidate Starts for Basato_55:

(Start: 19 @48246 has 9 MA's), (Start: 22 @48237 has 136 MA's), (41, 48075), (44, 48060), (49, 48027), (51, 48003), (54, 47973), (59, 47895), (62, 47847), (66, 47826), (68, 47805), (76, 47715), (80, 47679), (83, 47640), (84, 47628), (90, 47601),

Gene: Beaglebox_55 Start: 48068, Stop: 47601, Start Num: 22

Candidate Starts for Beaglebox_55:

(Start: 19 @48077 has 9 MA's), (Start: 22 @48068 has 136 MA's), (48, 47861), (49, 47858), (51, 47834), (54, 47804), (62, 47678), (66, 47657), (68, 47636),

Gene: BirdsNest_57 Start: 47703, Stop: 46999, Start Num: 19

Candidate Starts for BirdsNest_57:

(Start: 19 @47703 has 9 MA's), (Start: 23 @47688 has 25 MA's), (25, 47658), (53, 47448), (54, 47436), (58, 47400), (67, 47274), (72, 47205), (84, 47076), (90, 47049), (93, 47010),

Gene: Bishoperium_55 Start: 48501, Stop: 47821, Start Num: 22

Candidate Starts for Bishoperium_55:

(Start: 19 @48510 has 9 MA's), (Start: 22 @48501 has 136 MA's), (48, 48294), (49, 48291), (51, 48267), (54, 48237), (62, 48111), (66, 48090), (68, 48069), (76, 47979), (83, 47904), (84, 47892), (90, 47865),

Gene: Bluephacebaby_55 Start: 48504, Stop: 47824, Start Num: 22

Candidate Starts for Bluephacebaby_55:

(Start: 19 @48513 has 9 MA's), (Start: 22 @48504 has 136 MA's), (48, 48297), (49, 48294), (51, 48270), (54, 48240), (62, 48114), (66, 48093), (68, 48072), (76, 47982), (83, 47907), (84, 47895), (90, 47868),

Gene: Boehler_54 Start: 47946, Stop: 47269, Start Num: 22

Candidate Starts for Boehler_54:

(Start: 19 @47955 has 9 MA's), (Start: 22 @47946 has 136 MA's), (38, 47817), (41, 47784), (44, 47769), (48, 47739), (49, 47736), (51, 47712), (54, 47682), (59, 47604), (62, 47556), (66, 47535), (68, 47514), (76, 47424), (80, 47388), (83, 47349), (84, 47337), (90, 47310),

Gene: Bradissa_44 Start: 36341, Stop: 36946, Start Num: 23

Candidate Starts for Bradissa_44:

(Start: 23 @36341 has 25 MA's), (28, 36383), (54, 36578), (56, 36611), (59, 36659), (69, 36752), (77, 36821),

Gene: Brilliant_57 Start: 48504, Stop: 47824, Start Num: 22

Candidate Starts for Brilliant_57:

(Start: 19 @48513 has 9 MA's), (Start: 22 @48504 has 136 MA's), (48, 48297), (49, 48294), (51, 48270), (54, 48240), (62, 48114), (66, 48093), (68, 48072), (76, 47982), (83, 47907), (84, 47895), (90, 47868),

Gene: Buckeye_54 Start: 48015, Stop: 47338, Start Num: 22

Candidate Starts for Buckeye_54:

(Start: 19 @48024 has 9 MA's), (Start: 22 @48015 has 136 MA's), (48, 47808), (49, 47805), (51, 47781), (54, 47751), (62, 47625), (66, 47604), (68, 47583), (76, 47493), (80, 47457), (83, 47418), (84, 47406), (90, 47379),

Gene: CamL_55 Start: 48269, Stop: 47589, Start Num: 22

Candidate Starts for CamL_55:

(Start: 19 @48278 has 9 MA's), (Start: 22 @48269 has 136 MA's), (48, 48062), (49, 48059), (51, 48035), (54, 48005), (62, 47879), (66, 47858), (68, 47837), (76, 47747), (83, 47672), (84, 47660), (90, 47633),

Gene: Cannibal_55 Start: 48252, Stop: 47572, Start Num: 22

Candidate Starts for Cannibal_55:

(3, 48504), (4, 48495), (5, 48471), (6, 48441), (8, 48390), (9, 48351), (Start: 19 @48261 has 9 MA's), (Start: 22 @48252 has 136 MA's), (48, 48045), (49, 48042), (51, 48018), (54, 47988), (59, 47910), (62, 47862), (66, 47841), (76, 47730), (80, 47694), (83, 47655), (84, 47643), (90, 47616),

Gene: Carthage_53 Start: 47247, Stop: 46567, Start Num: 22

Candidate Starts for Carthage_53:

(Start: 19 @47256 has 9 MA's), (Start: 22 @47247 has 136 MA's), (48, 47040), (49, 47037), (51, 47013), (54, 46983), (62, 46857), (66, 46836), (68, 46815), (76, 46725), (80, 46689), (83, 46650), (84, 46638), (90, 46611),

Gene: Chaelin_56 Start: 48499, Stop: 47819, Start Num: 22

Candidate Starts for Chaelin_56:

(Start: 19 @48508 has 9 MA's), (Start: 22 @48499 has 136 MA's), (48, 48292), (49, 48289), (51, 48265), (54, 48235), (62, 48109), (66, 48088), (68, 48067), (76, 47977), (83, 47902), (84, 47890), (90, 47863),

Gene: CheetO_54 Start: 47985, Stop: 47308, Start Num: 22

Candidate Starts for CheetO_54:

(Start: 19 @47994 has 9 MA's), (Start: 22 @47985 has 136 MA's), (41, 47823), (44, 47808), (49, 47775), (51, 47751), (54, 47721), (59, 47643), (62, 47595), (66, 47574), (68, 47553), (76, 47463), (80, 47427), (83, 47388), (84, 47376), (88, 47355), (90, 47349),

Gene: Cher_55 Start: 48521, Stop: 47841, Start Num: 22

Candidate Starts for Cher_55:

(Start: 19 @48530 has 9 MA's), (Start: 22 @48521 has 136 MA's), (48, 48314), (49, 48311), (51, 48287), (54, 48257), (62, 48131), (66, 48110), (68, 48089), (76, 47999), (83, 47924), (84, 47912), (90, 47885),

Gene: Childish_55 Start: 48531, Stop: 47851, Start Num: 22

Candidate Starts for Childish_55:

(3, 48783), (4, 48774), (5, 48750), (6, 48720), (8, 48669), (9, 48630), (Start: 19 @48540 has 9 MA's), (Start: 22 @48531 has 136 MA's), (48, 48324), (49, 48321), (51, 48297), (54, 48267), (59, 48189), (62, 48141), (66, 48120), (76, 48009), (80, 47973), (83, 47934), (84, 47922), (90, 47895),

Gene: Chorkpop_55 Start: 48008, Stop: 47328, Start Num: 22

Candidate Starts for Chorkpop_55:

(3, 48260), (4, 48251), (5, 48227), (6, 48197), (8, 48146), (9, 48107), (Start: 19 @48017 has 9 MA's), (Start: 22 @48008 has 136 MA's), (48, 47801), (49, 47798), (51, 47774), (54, 47744), (59, 47666), (62, 47618), (66, 47597), (76, 47486), (80, 47450), (83, 47411), (84, 47399), (90, 47372),

Gene: Commandaria_9 Start: 5029, Stop: 5676, Start Num: 21

Candidate Starts for Commandaria_9:

(13, 4993), (Start: 21 @5029 has 1 MA's), (43, 5200), (47, 5227), (48, 5230), (55, 5287), (65, 5425), (77, 5548), (87, 5638),

Gene: Confidence_46 Start: 34232, Stop: 34837, Start Num: 23

Candidate Starts for Confidence_46:

(Start: 23 @34232 has 25 MA's), (28, 34274), (31, 34289), (54, 34469), (56, 34502), (59, 34550), (69, 34643), (77, 34712), (82, 34766),

Gene: Cornobble_54 Start: 47922, Stop: 47242, Start Num: 22

Candidate Starts for Cornobble_54:

(3, 48174), (4, 48165), (5, 48141), (6, 48111), (8, 48060), (9, 48021), (Start: 19 @47931 has 9 MA's), (Start: 22 @47922 has 136 MA's), (41, 47760), (44, 47745), (49, 47712), (51, 47688), (54, 47658), (59, 47580), (62, 47532), (66, 47511), (68, 47490), (76, 47400), (80, 47364), (83, 47325), (84, 47313), (90, 47286),

Gene: Cosmolli16_56 Start: 48711, Stop: 48031, Start Num: 22

Candidate Starts for Cosmolli16_56:

(3, 48963), (4, 48954), (5, 48930), (6, 48900), (8, 48849), (9, 48810), (Start: 19 @48720 has 9 MA's), (Start: 22 @48711 has 136 MA's), (48, 48504), (49, 48501), (51, 48477), (54, 48447), (59, 48369), (62, 48321), (66, 48300), (76, 48189), (80, 48153), (83, 48114), (84, 48102), (90, 48075),

Gene: Craff_58 Start: 48956, Stop: 48276, Start Num: 22

Candidate Starts for Craff_58:

(3, 49208), (4, 49199), (5, 49175), (6, 49145), (8, 49094), (9, 49055), (Start: 19 @48965 has 9 MA's), (Start: 22 @48956 has 136 MA's), (48, 48749), (49, 48746), (51, 48722), (54, 48692), (59, 48614), (62, 48566), (66, 48545), (76, 48434), (80, 48398), (83, 48359), (84, 48347), (90, 48320),

Gene: Crater_55 Start: 35960, Stop: 36562, Start Num: 23

Candidate Starts for Crater_55:

(Start: 23 @35960 has 25 MA's), (31, 36017), (36, 36053), (37, 36062), (50, 36146), (52, 36173), (54, 36197), (67, 36353), (69, 36368), (70, 36380), (77, 36437), (91, 36551),

Gene: Crownjwl_55 Start: 47988, Stop: 47311, Start Num: 22

Candidate Starts for Crownjwl_55:

(Start: 19 @47997 has 9 MA's), (Start: 22 @47988 has 136 MA's), (41, 47826), (44, 47811), (49, 47778), (51, 47754), (54, 47724), (59, 47646), (62, 47598), (66, 47577), (68, 47556), (76, 47466), (80, 47430), (83, 47391), (84, 47379), (88, 47358), (90, 47352),

Gene: DaddyDaniels_57 Start: 48488, Stop: 47808, Start Num: 22

Candidate Starts for DaddyDaniels_57:

(3, 48740), (4, 48731), (5, 48707), (6, 48677), (8, 48626), (9, 48587), (Start: 19 @48497 has 9 MA's), (Start: 22 @48488 has 136 MA's), (48, 48281), (49, 48278), (51, 48254), (54, 48224), (59, 48146), (62, 48098), (66, 48077), (76, 47966), (80, 47930), (83, 47891), (84, 47879), (90, 47852),

Gene: Daffy_55 Start: 47994, Stop: 47314, Start Num: 22

Candidate Starts for Daffy_55:

(3, 48246), (4, 48237), (5, 48213), (6, 48183), (8, 48132), (9, 48093), (Start: 19 @48003 has 9 MA's), (Start: 22 @47994 has 136 MA's), (48, 47787), (49, 47784), (51, 47760), (54, 47730), (59, 47652), (62, 47604), (66, 47583), (76, 47472), (80, 47436), (83, 47397), (84, 47385), (90, 47358),

Gene: Dalilpop_11 Start: 6087, Stop: 6800, Start Num: 17

Candidate Starts for Dalilpop_11:

(Start: 17 @6087 has 15 MA's), (24, 6114), (30, 6171), (41, 6276), (45, 6291), (47, 6309), (48, 6312), (49, 6315), (55, 6369), (57, 6402), (77, 6633), (86, 6720), (93, 6774),

Gene: Dati_55 Start: 48526, Stop: 47846, Start Num: 22

Candidate Starts for Dati_55:

(Start: 19 @48535 has 9 MA's), (Start: 22 @48526 has 136 MA's), (48, 48319), (49, 48316), (51, 48292), (54, 48262), (62, 48136), (66, 48115), (68, 48094), (76, 48004), (83, 47929), (84, 47917), (90, 47890),

Gene: Dione_53 Start: 47666, Stop: 46989, Start Num: 22

Candidate Starts for Dione_53:

(Start: 19 @47675 has 9 MA's), (Start: 22 @47666 has 136 MA's), (38, 47537), (41, 47504), (44, 47489), (48, 47459), (49, 47456), (51, 47432), (54, 47402), (59, 47324), (62, 47276), (66, 47255), (68, 47234), (76, 47144), (80, 47108), (83, 47069), (84, 47057), (87, 47042), (90, 47030),

Gene: DirtMcgirt_65 Start: 40913, Stop: 41590, Start Num: 23

Candidate Starts for DirtMcgirt_65:

(Start: 23 @40913 has 25 MA's), (28, 40955), (48, 41114), (49, 41117), (51, 41141), (54, 41171), (59, 41249), (62, 41297), (66, 41318), (76, 41429), (80, 41465), (83, 41504), (84, 41516),

Gene: DoesntMatter_53 Start: 47959, Stop: 47282, Start Num: 22

Candidate Starts for DoesntMatter_53:

(Start: 19 @47968 has 9 MA's), (Start: 22 @47959 has 136 MA's), (38, 47830), (41, 47797), (44, 47782), (48, 47752), (49, 47749), (51, 47725), (54, 47695), (59, 47617), (62, 47569), (66, 47548), (68, 47527), (76, 47437), (80, 47401), (83, 47362), (84, 47350), (87, 47335), (90, 47323),

Gene: DonSanchon_53 Start: 47700, Stop: 47014, Start Num: 19

Candidate Starts for DonSanchon_53:

(Start: 19 @47700 has 9 MA's), (Start: 22 @47691 has 136 MA's), (48, 47484), (49, 47481), (51, 47457), (54, 47427), (62, 47301), (66, 47280), (68, 47259), (76, 47169), (80, 47133), (83, 47094), (84, 47082), (90, 47055),

Gene: Donovan_52 Start: 35711, Stop: 36400, Start Num: 19

Candidate Starts for Donovan_52:

(12, 35645), (Start: 19 @35711 has 9 MA's), (32, 35795), (42, 35885), (49, 35927), (51, 35951), (54, 35981), (68, 36152), (83, 36314), (84, 36326), (90, 36353),

Gene: Doomphist_66 Start: 43323, Stop: 44000, Start Num: 23

Candidate Starts for Doomphist_66:

(Start: 23 @43323 has 25 MA's), (28, 43365), (48, 43524), (49, 43527), (51, 43551), (54, 43581), (59, 43659), (62, 43707), (66, 43728), (76, 43839), (80, 43875), (83, 43914), (84, 43926),

Gene: Drago_63 Start: 40916, Stop: 41593, Start Num: 23

Candidate Starts for Drago_63:

(Start: 23 @40916 has 25 MA's), (28, 40958), (48, 41117), (49, 41120), (51, 41144), (54, 41174), (59, 41252), (62, 41300), (66, 41321), (76, 41432), (80, 41468), (83, 41507), (84, 41519),

Gene: Emianna_10 Start: 5953, Stop: 6612, Start Num: 17

Candidate Starts for Emianna_10:

(7, 5818), (13, 5926), (Start: 17 @5953 has 15 MA's), (47, 6154), (48, 6157), (55, 6214), (58, 6247), (66, 6358), (77, 6475), (87, 6565),

Gene: EmpTee_54 Start: 47972, Stop: 47295, Start Num: 22

Candidate Starts for EmpTee_54:

(Start: 19 @47981 has 9 MA's), (Start: 22 @47972 has 136 MA's), (38, 47843), (41, 47810), (44, 47795), (48, 47765), (49, 47762), (51, 47738), (54, 47708), (59, 47630), (62, 47582), (66, 47561), (68, 47540), (76, 47450), (80, 47414), (83, 47375), (84, 47363), (90, 47336),

Gene: EnalisNailo_43 Start: 35875, Stop: 36480, Start Num: 23

Candidate Starts for EnalisNailo_43:

(Start: 23 @35875 has 25 MA's), (28, 35917), (54, 36112), (56, 36145), (59, 36193), (69, 36286), (77, 36355),

Gene: Enby_67 Start: 41192, Stop: 41869, Start Num: 23

Candidate Starts for Enby_67:

(Start: 23 @41192 has 25 MA's), (28, 41234), (48, 41393), (49, 41396), (51, 41420), (54, 41450), (59, 41528), (62, 41576), (66, 41597), (76, 41708), (80, 41744), (83, 41783), (84, 41795),

Gene: Ennea_13 Start: 6764, Stop: 7453, Start Num: 17

Candidate Starts for Ennea_13:

(10, 6692), (13, 6737), (Start: 17 @6764 has 15 MA's), (35, 6881), (47, 6980), (48, 6983), (55, 7040), (66, 7184), (75, 7277), (77, 7301), (87, 7391), (92, 7415),

Gene: Eremos_54 Start: 47965, Stop: 47288, Start Num: 22

Candidate Starts for Eremos_54:

(Start: 19 @47974 has 9 MA's), (Start: 22 @47965 has 136 MA's), (41, 47803), (44, 47788), (49, 47755), (51, 47731), (54, 47701), (59, 47623), (62, 47575), (66, 47554), (68, 47533), (76, 47443), (80, 47407), (83, 47368), (84, 47356), (90, 47329),

Gene: Etaye_55 Start: 48795, Stop: 48115, Start Num: 22

Candidate Starts for Etaye_55:

(Start: 19 @48804 has 9 MA's), (Start: 22 @48795 has 136 MA's), (48, 48588), (49, 48585), (51, 48561), (54, 48531), (62, 48405), (66, 48384), (68, 48363), (76, 48273), (83, 48198), (84, 48186), (90, 48159),

Gene: Eugenia_55 Start: 48360, Stop: 47680, Start Num: 22

Candidate Starts for Eugenia_55:

(Start: 19 @48369 has 9 MA's), (Start: 22 @48360 has 136 MA's), (48, 48153), (49, 48150), (51, 48126), (54, 48096), (62, 47970), (66, 47949), (68, 47928), (76, 47838), (83, 47763), (84, 47751), (90, 47724),

Gene: Flapper_9 Start: 4974, Stop: 5633, Start Num: 17

Candidate Starts for Flapper_9:

(Start: 17 @4974 has 15 MA's), (30, 5037), (45, 5157), (47, 5175), (48, 5178), (49, 5181), (55, 5235), (77, 5499), (86, 5586),

Gene: Foxboro_10 Start: 5964, Stop: 6641, Start Num: 17

Candidate Starts for Foxboro_10:

(7, 5829), (13, 5937), (Start: 17 @5964 has 15 MA's), (47, 6165), (48, 6168), (55, 6225), (66, 6372), (77, 6489), (87, 6579), (88, 6585),

Gene: Fozzie_54 Start: 48298, Stop: 47618, Start Num: 22

Candidate Starts for Fozzie_54:

(3, 48550), (4, 48541), (5, 48517), (6, 48487), (8, 48436), (9, 48397), (Start: 19 @48307 has 9 MA's), (Start: 22 @48298 has 136 MA's), (41, 48136), (44, 48121), (49, 48088), (51, 48064), (54, 48034), (59, 47956), (62, 47908), (66, 47887), (68, 47866), (76, 47776), (80, 47740), (83, 47701), (84, 47689), (90, 47662),

Gene: Frankicide_54 Start: 47996, Stop: 47319, Start Num: 22

Candidate Starts for Frankicide_54:

(Start: 19 @48005 has 9 MA's), (Start: 22 @47996 has 136 MA's), (41, 47834), (44, 47819), (49, 47786), (51, 47762), (54, 47732), (59, 47654), (62, 47606), (66, 47585), (68, 47564), (76, 47474), (80, 47438), (83, 47399), (84, 47387), (90, 47360),

Gene: Freya_53 Start: 47657, Stop: 46980, Start Num: 22

Candidate Starts for Freya_53:

(Start: 19 @47666 has 9 MA's), (Start: 22 @47657 has 136 MA's), (48, 47450), (49, 47447), (51, 47423), (54, 47393), (59, 47315), (62, 47267), (66, 47246), (68, 47225), (76, 47135), (80, 47099), (83, 47060), (84, 47048), (87, 47033), (90, 47021),

Gene: Fruitloop_61 Start: 42550, Stop: 43227, Start Num: 23

Candidate Starts for Fruitloop_61:

(Start: 23 @42550 has 25 MA's), (28, 42592), (48, 42751), (49, 42754), (51, 42778), (54, 42808), (59, 42886), (62, 42934), (66, 42955), (76, 43066), (80, 43102), (83, 43141), (84, 43153),

Gene: FugateOSU_55 Start: 48502, Stop: 47822, Start Num: 22

Candidate Starts for FugateOSU_55:

(Start: 19 @48511 has 9 MA's), (Start: 22 @48502 has 136 MA's), (48, 48295), (49, 48292), (51, 48268), (54, 48238), (62, 48112), (66, 48091), (68, 48070), (76, 47980), (83, 47905), (84, 47893), (90, 47866),

Gene: GMA2_122 Start: 101578, Stop: 100931, Start Num: 20

Candidate Starts for GMA2_122:

(20, 101578), (28, 101527), (29, 101521), (33, 101488), (40, 101416), (54, 101323), (71, 101098), (73, 101086), (74, 101077), (81, 101011),

Gene: Gareth_55 Start: 48496, Stop: 47816, Start Num: 22

Candidate Starts for Gareth_55:

(Start: 19 @48505 has 9 MA's), (Start: 22 @48496 has 136 MA's), (48, 48289), (49, 48286), (51, 48262), (54, 48232), (62, 48106), (66, 48085), (68, 48064), (76, 47974), (83, 47899), (84, 47887), (90, 47860),

Gene: Giraffe_56 Start: 48492, Stop: 47812, Start Num: 22

Candidate Starts for Giraffe_56:

(3, 48744), (4, 48735), (5, 48711), (6, 48681), (8, 48630), (9, 48591), (Start: 19 @48501 has 9 MA's), (Start: 22 @48492 has 136 MA's), (48, 48285), (49, 48282), (51, 48258), (54, 48228), (59, 48150), (62, 48102), (66, 48081), (76, 47970), (83, 47895), (84, 47883), (90, 47856),

Gene: Grand2040_55 Start: 48486, Stop: 47806, Start Num: 22

Candidate Starts for Grand2040_55:

(3, 48738), (4, 48729), (5, 48705), (6, 48675), (8, 48624), (9, 48585), (Start: 19 @48495 has 9 MA's), (Start: 22 @48486 has 136 MA's), (48, 48279), (49, 48276), (51, 48252), (54, 48222), (59, 48144), (62, 48096), (66, 48075), (76, 47964), (80, 47928), (83, 47889), (84, 47877), (90, 47850),

Gene: GrootJr_12 Start: 6386, Stop: 7060, Start Num: 17

Candidate Starts for GrootJr_12:

(7, 6251), (13, 6359), (Start: 17 @6386 has 15 MA's), (47, 6587), (48, 6590), (55, 6647), (58, 6680), (66, 6791), (77, 6908), (87, 6998),

Gene: Gwilliam_57 Start: 48849, Stop: 48169, Start Num: 22

Candidate Starts for Gwilliam_57:

(Start: 19 @48858 has 9 MA's), (Start: 22 @48849 has 136 MA's), (48, 48642), (49, 48639), (51, 48615), (54, 48585), (62, 48459), (66, 48438), (68, 48417), (76, 48327), (83, 48252), (84, 48240), (90, 48213),

Gene: HSavage_54 Start: 47975, Stop: 47298, Start Num: 22

Candidate Starts for HSavage_54:

(Start: 19 @47984 has 9 MA's), (Start: 22 @47975 has 136 MA's), (41, 47813), (44, 47798), (49, 47765), (51, 47741), (54, 47711), (59, 47633), (62, 47585), (66, 47564), (68, 47543), (76, 47453), (80, 47417), (83, 47378), (84, 47366), (90, 47339),

Gene: Haimas_54 Start: 47991, Stop: 47314, Start Num: 22

Candidate Starts for Haimas_54:

(Start: 19 @48000 has 9 MA's), (Start: 22 @47991 has 136 MA's), (48, 47784), (49, 47781), (51, 47757), (54, 47727), (62, 47601), (66, 47580), (68, 47559), (76, 47469), (83, 47394), (84, 47382), (90, 47355),

Gene: Haleema_54 Start: 47990, Stop: 47310, Start Num: 22

Candidate Starts for Haleema_54:

(3, 48242), (4, 48233), (5, 48209), (6, 48179), (8, 48128), (9, 48089), (Start: 19 @47999 has 9 MA's), (Start: 22 @47990 has 136 MA's), (48, 47783), (49, 47780), (51, 47756), (54, 47726), (59, 47648), (62, 47600), (66, 47579), (76, 47468), (80, 47432), (83, 47393), (84, 47381), (90, 47354),

Gene: Hamish_54 Start: 47984, Stop: 47307, Start Num: 22

Candidate Starts for Hamish_54:

(Start: 19 @47993 has 9 MA's), (Start: 22 @47984 has 136 MA's), (48, 47777), (49, 47774), (51, 47750), (54, 47720), (62, 47594), (66, 47573), (68, 47552), (76, 47462), (83, 47387), (84, 47375), (90, 47348),

Gene: Harvey_54 Start: 48021, Stop: 47344, Start Num: 22

Candidate Starts for Harvey_54:

(3, 48273), (4, 48264), (5, 48240), (6, 48210), (8, 48159), (9, 48120), (Start: 19 @48030 has 9 MA's), (Start: 22 @48021 has 136 MA's), (41, 47859), (44, 47844), (49, 47811), (51, 47787), (54, 47757), (59, 47679), (62, 47631), (66, 47610), (68, 47589), (76, 47499), (80, 47463), (83, 47424), (84, 47412), (90, 47385),

Gene: Hashim76_58 Start: 48273, Stop: 47572, Start Num: 19

Candidate Starts for Hashim76_58:

(Start: 19 @48273 has 9 MA's), (Start: 23 @48258 has 25 MA's), (25, 48228), (53, 48018), (54, 48006), (58, 47970), (61, 47883), (68, 47832), (72, 47775), (84, 47646), (90, 47619),

Gene: Held_55 Start: 47995, Stop: 47315, Start Num: 22

Candidate Starts for Held_55:

(3, 48247), (4, 48238), (5, 48214), (6, 48184), (8, 48133), (9, 48094), (Start: 19 @48004 has 9 MA's), (Start: 22 @47995 has 136 MA's), (48, 47788), (49, 47785), (51, 47761), (54, 47731), (59, 47653), (62, 47605), (66, 47584), (76, 47473), (80, 47437), (83, 47398), (84, 47386), (90, 47359),

Gene: HenryJackson_55 Start: 48520, Stop: 47840, Start Num: 22

Candidate Starts for HenryJackson_55:

(Start: 19 @48529 has 9 MA's), (Start: 22 @48520 has 136 MA's), (48, 48313), (49, 48310), (51, 48286), (54, 48256), (62, 48130), (66, 48109), (68, 48088), (76, 47998), (83, 47923), (84, 47911), (90, 47884),

Gene: Hertubise_55 Start: 48287, Stop: 47607, Start Num: 22

Candidate Starts for Hertubise_55:

(Start: 19 @48296 has 9 MA's), (Start: 22 @48287 has 136 MA's), (48, 48080), (49, 48077), (51, 48053), (54, 48023), (62, 47897), (66, 47876), (68, 47855), (76, 47765), (83, 47690), (84, 47678), (90, 47651),

Gene: Hetaeria_54 Start: 48022, Stop: 47345, Start Num: 22

Candidate Starts for Hetaeria_54:

(3, 48274), (4, 48265), (5, 48241), (6, 48211), (8, 48160), (9, 48121), (Start: 19 @48031 has 9 MA's), (Start: 22 @48022 has 136 MA's), (41, 47860), (44, 47845), (49, 47812), (51, 47788), (54, 47758), (59, 47680), (62, 47632), (66, 47611), (68, 47590), (76, 47500), (80, 47464), (83, 47425), (84, 47413), (90, 47386),

Gene: Horchata_54 Start: 47975, Stop: 47298, Start Num: 22

Candidate Starts for Horchata_54:

(Start: 19 @47984 has 9 MA's), (Start: 22 @47975 has 136 MA's), (41, 47813), (44, 47798), (49, 47765), (51, 47741), (54, 47711), (59, 47633), (62, 47585), (66, 47564), (68, 47543), (76, 47453), (80, 47417), (83, 47378), (84, 47366), (90, 47339),

Gene: Inverness_54 Start: 47984, Stop: 47307, Start Num: 22

Candidate Starts for Inverness_54:

(3, 48236), (4, 48227), (5, 48203), (6, 48173), (8, 48122), (9, 48083), (Start: 19 @47993 has 9 MA's), (Start: 22 @47984 has 136 MA's), (41, 47822), (44, 47807), (49, 47774), (51, 47750), (54, 47720), (59, 47642), (62, 47594), (66, 47573), (68, 47552), (76, 47462), (80, 47426), (83, 47387), (84, 47375), (90, 47348),

Gene: IrishSherpFalk_67 Start: 43906, Stop: 44583, Start Num: 23

Candidate Starts for IrishSherpFalk_67:

(Start: 23 @43906 has 25 MA's), (28, 43948), (48, 44107), (49, 44110), (51, 44134), (54, 44164), (59, 44242), (62, 44290), (66, 44311), (76, 44422), (80, 44458), (83, 44497), (84, 44509),

Gene: IsaacEli_56 Start: 48508, Stop: 47828, Start Num: 22

Candidate Starts for IsaacEli_56:

(Start: 19 @48517 has 9 MA's), (Start: 22 @48508 has 136 MA's), (48, 48301), (49, 48298), (51, 48274), (54, 48244), (62, 48118), (66, 48097), (68, 48076), (76, 47986), (83, 47911), (84, 47899), (90, 47872),

Gene: JDog_54 Start: 48524, Stop: 47844, Start Num: 22

Candidate Starts for JDog_54:

(2, 48791), (3, 48776), (4, 48767), (5, 48743), (6, 48713), (8, 48662), (9, 48623), (Start: 19 @48533 has 9 MA's), (Start: 22 @48524 has 136 MA's), (48, 48317), (49, 48314), (51, 48290), (54, 48260), (62, 48134), (66, 48113), (68, 48092), (76, 48002), (83, 47927), (84, 47915), (90, 47888),

Gene: Jifall16_9 Start: 5425, Stop: 6087, Start Num: 17

Candidate Starts for Jifall16_9:

(7, 5290), (13, 5398), (Start: 17 @5425 has 15 MA's), (47, 5626), (48, 5629), (55, 5686), (66, 5833), (77, 5950), (87, 6040),

Gene: Jillium_55 Start: 48516, Stop: 47836, Start Num: 22

Candidate Starts for Jillium_55:

(Start: 19 @48525 has 9 MA's), (Start: 22 @48516 has 136 MA's), (48, 48309), (49, 48306), (51, 48282), (54, 48252), (62, 48126), (66, 48105), (68, 48084), (76, 47994), (83, 47919), (84, 47907), (90, 47880),

Gene: Kahve_55 Start: 48517, Stop: 47837, Start Num: 22

Candidate Starts for Kahve_55:

(Start: 19 @48526 has 9 MA's), (Start: 22 @48517 has 136 MA's), (48, 48310), (49, 48307), (51, 48283), (54, 48253), (62, 48127), (66, 48106), (68, 48085), (76, 47995), (83, 47920), (84, 47908), (90, 47881),

Gene: KidneyBean_10 Start: 5770, Stop: 6429, Start Num: 17

Candidate Starts for KidneyBean_10:

(7, 5635), (13, 5743), (Start: 17 @5770 has 15 MA's), (47, 5971), (48, 5974), (55, 6031), (58, 6064), (66, 6175), (77, 6292), (87, 6382),

Gene: Kikipoo_56 Start: 48508, Stop: 47828, Start Num: 22

Candidate Starts for Kikipoo_56:

(Start: 19 @48517 has 9 MA's), (Start: 22 @48508 has 136 MA's), (48, 48301), (49, 48298), (51, 48274), (54, 48244), (62, 48118), (66, 48097), (68, 48076), (76, 47986), (83, 47911), (84, 47899), (90, 47872),

Gene: Kimbrough_56 Start: 48517, Stop: 47837, Start Num: 22

Candidate Starts for Kimbrough_56:

(Start: 19 @48526 has 9 MA's), (Start: 22 @48517 has 136 MA's), (48, 48310), (49, 48307), (51, 48283), (54, 48253), (62, 48127), (66, 48106), (68, 48085), (76, 47995), (83, 47920), (84, 47908), (90, 47881),

Gene: KingTut_47 Start: 44181, Stop: 43501, Start Num: 22

Candidate Starts for KingTut_47:

(Start: 19 @44190 has 9 MA's), (Start: 22 @44181 has 136 MA's), (48, 43974), (49, 43971), (51, 43947), (54, 43917), (62, 43791), (66, 43770), (68, 43749), (76, 43659), (83, 43584), (84, 43572), (90, 43545),

Gene: KlimbOn_54 Start: 47976, Stop: 47299, Start Num: 22

Candidate Starts for KlimbOn_54:

(Start: 19 @47985 has 9 MA's), (Start: 22 @47976 has 136 MA's), (41, 47814), (44, 47799), (49, 47766), (51, 47742), (54, 47712), (59, 47634), (62, 47586), (66, 47565), (68, 47544), (76, 47454), (80, 47418), (83, 47379), (84, 47367), (88, 47346), (90, 47340),

Gene: Kurt_10 Start: 5953, Stop: 6612, Start Num: 17

Candidate Starts for Kurt_10:

(7, 5818), (13, 5926), (Start: 17 @5953 has 15 MA's), (47, 6154), (48, 6157), (55, 6214), (58, 6247), (66, 6358), (77, 6475), (87, 6565),

Gene: Kwadwo_54 Start: 47969, Stop: 47289, Start Num: 22

Candidate Starts for Kwadwo_54:

(3, 48221), (4, 48212), (5, 48188), (6, 48158), (8, 48107), (9, 48068), (Start: 19 @47978 has 9 MA's), (Start: 22 @47969 has 136 MA's), (48, 47762), (49, 47759), (51, 47735), (54, 47705), (59, 47627), (62, 47579), (66, 47558), (76, 47447), (80, 47411), (83, 47372), (84, 47360), (90, 47333),

Gene: Lasso_55 Start: 48244, Stop: 47564, Start Num: 22

Candidate Starts for Lasso_55:

(3, 48496), (4, 48487), (5, 48463), (6, 48433), (8, 48382), (9, 48343), (Start: 19 @48253 has 9 MA's), (Start: 22 @48244 has 136 MA's), (48, 48037), (49, 48034), (51, 48010), (54, 47980), (59, 47902), (62, 47854), (66, 47833), (76, 47722), (80, 47686), (83, 47647), (84, 47635), (90, 47608),

Gene: LeeLot_55 Start: 48296, Stop: 47616, Start Num: 22

Candidate Starts for LeeLot_55:

(2, 48563), (3, 48548), (4, 48539), (5, 48515), (6, 48485), (8, 48434), (9, 48395), (Start: 19 @48305 has 9 MA's), (Start: 22 @48296 has 136 MA's), (48, 48089), (49, 48086), (51, 48062), (54, 48032), (62, 47906), (66, 47885), (68, 47864), (76, 47774), (83, 47699), (84, 47687), (90, 47660),

Gene: Lego3393_54 Start: 48508, Stop: 47828, Start Num: 22

Candidate Starts for Lego3393_54:

(Start: 19 @48517 has 9 MA's), (Start: 22 @48508 has 136 MA's), (48, 48301), (49, 48298), (51, 48274), (54, 48244), (62, 48118), (66, 48097), (68, 48076), (76, 47986), (83, 47911), (84, 47899), (90, 47872),

Gene: Lilas_46 Start: 37586, Stop: 38191, Start Num: 23

Candidate Starts for Lilas_46:

(Start: 23 @37586 has 25 MA's), (28, 37628), (54, 37823), (56, 37856), (59, 37904), (69, 37997), (77, 38066),

Gene: Llij_62 Start: 41070, Stop: 41747, Start Num: 23

Candidate Starts for Llij_62:

(Start: 23 @41070 has 25 MA's), (28, 41112), (48, 41271), (49, 41274), (51, 41298), (54, 41328), (59, 41406), (62, 41454), (66, 41475), (76, 41586), (80, 41622), (83, 41661), (84, 41673),

Gene: Lollipop1437_12 Start: 6752, Stop: 7441, Start Num: 17

Candidate Starts for Lollipop1437_12:

(10, 6680), (13, 6725), (Start: 17 @6752 has 15 MA's), (35, 6869), (47, 6968), (48, 6971), (55, 7028), (66, 7172), (75, 7265), (77, 7289), (87, 7379), (92, 7403),

Gene: Lorde_66 Start: 40357, Stop: 41034, Start Num: 23

Candidate Starts for Lorde_66:

(Start: 23 @40357 has 25 MA's), (28, 40399), (48, 40558), (49, 40561), (51, 40585), (54, 40615), (59, 40693), (62, 40741), (66, 40762), (76, 40873), (80, 40909), (83, 40948), (84, 40960),

Gene: LuckyMarjie_53 Start: 47677, Stop: 47000, Start Num: 22

Candidate Starts for LuckyMarjie_53:

(Start: 19 @47686 has 9 MA's), (Start: 22 @47677 has 136 MA's), (38, 47548), (41, 47515), (44, 47500), (48, 47470), (49, 47467), (51, 47443), (54, 47413), (59, 47335), (62, 47287), (66, 47266), (68, 47245), (76, 47155), (80, 47119), (83, 47080), (84, 47068), (87, 47053), (90, 47041),

Gene: Lulumae_53 Start: 47662, Stop: 46985, Start Num: 22

Candidate Starts for Lulumae_53:

(Start: 19 @47671 has 9 MA's), (Start: 22 @47662 has 136 MA's), (38, 47533), (41, 47500), (44, 47485), (48, 47455), (49, 47452), (51, 47428), (54, 47398), (59, 47320), (62, 47272), (66, 47251), (68, 47230), (76, 47140), (80, 47104), (83, 47065), (84, 47053), (87, 47038), (90, 47026),

Gene: MRabcd_54 Start: 48059, Stop: 47379, Start Num: 22

Candidate Starts for MRabcd_54:

(3, 48311), (4, 48302), (5, 48278), (6, 48248), (8, 48197), (9, 48158), (Start: 19 @48068 has 9 MA's), (Start: 22 @48059 has 136 MA's), (48, 47852), (49, 47849), (51, 47825), (54, 47795), (59, 47717), (62, 47669), (66, 47648), (76, 47537), (80, 47501), (83, 47462), (84, 47450), (90, 47423),

Gene: Mana_54 Start: 47984, Stop: 47304, Start Num: 22

Candidate Starts for Mana_54:

(3, 48236), (4, 48227), (5, 48203), (6, 48173), (8, 48122), (9, 48083), (Start: 19 @47993 has 9 MA's), (Start: 22 @47984 has 136 MA's), (48, 47777), (49, 47774), (51, 47750), (54, 47720), (59, 47642), (62, 47594), (66, 47573), (76, 47462), (80, 47426), (83, 47387), (84, 47375), (90, 47348),

Gene: Manad_54 Start: 47959, Stop: 47282, Start Num: 22

Candidate Starts for Manad_54:

(3, 48211), (4, 48202), (5, 48178), (6, 48148), (8, 48097), (9, 48058), (Start: 19 @47968 has 9 MA's), (Start: 22 @47959 has 136 MA's), (41, 47797), (44, 47782), (49, 47749), (51, 47725), (54, 47695), (59, 47617), (62, 47569), (66, 47548), (68, 47527), (76, 47437), (80, 47401), (83, 47362), (84, 47350), (90, 47323),

Gene: Maru_55 Start: 48423, Stop: 47743, Start Num: 22

Candidate Starts for Maru_55:

(3, 48675), (4, 48666), (5, 48642), (6, 48612), (8, 48561), (9, 48522), (Start: 19 @48432 has 9 MA's), (Start: 22 @48423 has 136 MA's), (48, 48216), (49, 48213), (51, 48189), (54, 48159), (59, 48081), (62, 48033), (66, 48012), (76, 47901), (80, 47865), (83, 47826), (84, 47814), (90, 47787),

Gene: Matalotodo_54 Start: 47994, Stop: 47317, Start Num: 22

Candidate Starts for Matalotodo_54:

(Start: 19 @48003 has 9 MA's), (Start: 22 @47994 has 136 MA's), (48, 47787), (49, 47784), (51, 47760), (54, 47730), (62, 47604), (66, 47583), (68, 47562), (76, 47472), (80, 47436), (83, 47397), (84, 47385), (90, 47358),

Gene: Mecca_55 Start: 48505, Stop: 47825, Start Num: 22

Candidate Starts for Mecca_55:

(Start: 19 @48514 has 9 MA's), (Start: 22 @48505 has 136 MA's), (48, 48298), (49, 48295), (51, 48271), (54, 48241), (62, 48115), (66, 48094), (68, 48073), (76, 47983), (83, 47908), (84, 47896), (90, 47869),

Gene: Megatron_56 Start: 48496, Stop: 47816, Start Num: 22

Candidate Starts for Megatron_56:

(Start: 19 @48505 has 9 MA's), (Start: 22 @48496 has 136 MA's), (48, 48289), (49, 48286), (51, 48262), (54, 48232), (62, 48106), (66, 48085), (68, 48064), (76, 47974), (83, 47899), (84, 47887), (90, 47860),

Gene: Melc17_55 Start: 48814, Stop: 48134, Start Num: 22

Candidate Starts for Melc17_55:

(Start: 19 @48823 has 9 MA's), (Start: 22 @48814 has 136 MA's), (48, 48607), (49, 48604), (51, 48580), (54, 48550), (62, 48424), (66, 48403), (68, 48382), (76, 48292), (83, 48217), (84, 48205), (90, 48178),

Gene: Mesh1_56 Start: 48516, Stop: 47836, Start Num: 22

Candidate Starts for Mesh1_56:

(3, 48768), (4, 48759), (5, 48735), (6, 48705), (8, 48654), (9, 48615), (Start: 19 @48525 has 9 MA's), (Start: 22 @48516 has 136 MA's), (41, 48354), (44, 48339), (49, 48306), (51, 48282), (54, 48252), (59, 48174), (62, 48126), (66, 48105), (68, 48084), (76, 47994), (80, 47958), (83, 47919), (84, 47907), (90, 47880),

Gene: MitKao_55 Start: 47994, Stop: 47314, Start Num: 22

Candidate Starts for MitKao_55:

(3, 48246), (4, 48237), (5, 48213), (6, 48183), (8, 48132), (9, 48093), (Start: 19 @48003 has 9 MA's), (Start: 22 @47994 has 136 MA's), (48, 47787), (49, 47784), (51, 47760), (54, 47730), (59, 47652), (62, 47604), (66, 47583), (76, 47472), (80, 47436), (83, 47397), (84, 47385), (90, 47358),

Gene: Morgushi_55 Start: 47983, Stop: 47303, Start Num: 22

Candidate Starts for Morgushi_55:

(3, 48235), (4, 48226), (5, 48202), (6, 48172), (8, 48121), (9, 48082), (Start: 19 @47992 has 9 MA's), (Start: 22 @47983 has 136 MA's), (48, 47776), (49, 47773), (51, 47749), (54, 47719), (59, 47641), (62, 47593), (66, 47572), (76, 47461), (80, 47425), (83, 47386), (84, 47374), (90, 47347),

Gene: Morty_56 Start: 48505, Stop: 47825, Start Num: 22

Candidate Starts for Morty_56:

(Start: 19 @48514 has 9 MA's), (Start: 22 @48505 has 136 MA's), (48, 48298), (49, 48295), (51, 48271), (54, 48241), (62, 48115), (66, 48094), (68, 48073), (76, 47983), (83, 47908), (84, 47896), (90, 47869),

Gene: Mosaic_54 Start: 47988, Stop: 47308, Start Num: 22

Candidate Starts for Mosaic_54:

(3, 48240), (4, 48231), (5, 48207), (6, 48177), (8, 48126), (9, 48087), (Start: 19 @47997 has 9 MA's), (Start: 22 @47988 has 136 MA's), (48, 47781), (49, 47778), (51, 47754), (54, 47724), (59, 47646), (62, 47598), (66, 47577), (76, 47466), (80, 47430), (83, 47391), (84, 47379), (90, 47352),

Gene: MrPhizzler_56 Start: 48450, Stop: 47770, Start Num: 22

Candidate Starts for MrPhizzler_56:

(3, 48702), (4, 48693), (5, 48669), (6, 48639), (8, 48588), (9, 48549), (Start: 19 @48459 has 9 MA's), (Start: 22 @48450 has 136 MA's), (48, 48243), (49, 48240), (51, 48216), (54, 48186), (59, 48108), (62, 48060), (66, 48039), (76, 47928), (80, 47892), (83, 47853), (84, 47841), (90, 47814),

Gene: Mulan_55 Start: 48222, Stop: 47542, Start Num: 22

Candidate Starts for Mulan_55:

(Start: 19 @48231 has 9 MA's), (Start: 22 @48222 has 136 MA's), (48, 48015), (49, 48012), (51, 47988), (54, 47958), (62, 47832), (66, 47811), (68, 47790), (76, 47700), (83, 47625), (84, 47613), (90, 47586),

Gene: Murdoc_54 Start: 47984, Stop: 47307, Start Num: 22

Candidate Starts for Murdoc_54:

(Start: 19 @47993 has 9 MA's), (Start: 22 @47984 has 136 MA's), (48, 47777), (49, 47774), (51, 47750), (54, 47720), (62, 47594), (66, 47573), (68, 47552), (76, 47462), (80, 47426), (83, 47387), (84, 47375), (90, 47348),

Gene: Nacho_0056 Start: 48499, Stop: 47819, Start Num: 22

Candidate Starts for Nacho_0056:

(Start: 19 @48508 has 9 MA's), (Start: 22 @48499 has 136 MA's), (48, 48292), (49, 48289), (51, 48265), (54, 48235), (62, 48109), (66, 48088), (68, 48067), (76, 47977), (83, 47902), (84, 47890), (90, 47863),

Gene: NatB6_10 Start: 6032, Stop: 6694, Start Num: 17

Candidate Starts for NatB6_10:

(7, 5897), (13, 6005), (Start: 17 @6032 has 15 MA's), (26, 6074), (47, 6233), (48, 6236), (52, 6269), (55, 6293), (66, 6440), (77, 6557), (87, 6647), (88, 6653),

Gene: Newman_54 Start: 47979, Stop: 47302, Start Num: 22

Candidate Starts for Newman_54:

(3, 48231), (4, 48222), (5, 48198), (6, 48168), (8, 48117), (9, 48078), (Start: 19 @47988 has 9 MA's), (Start: 22 @47979 has 136 MA's), (41, 47817), (44, 47802), (49, 47769), (51, 47745), (54, 47715), (59, 47637), (62, 47589), (66, 47568), (68, 47547), (76, 47457), (80, 47421), (83, 47382), (84, 47370), (90, 47343),

Gene: NovumRegina_10 Start: 6385, Stop: 7059, Start Num: 17

Candidate Starts for NovumRegina_10:

(7, 6250), (13, 6358), (Start: 17 @6385 has 15 MA's), (47, 6586), (48, 6589), (55, 6646), (58, 6679), (66, 6790), (77, 6907), (87, 6997),

Gene: Numberten_54 Start: 47974, Stop: 47297, Start Num: 22

Candidate Starts for Numberten_54:

(Start: 19 @47983 has 9 MA's), (Start: 22 @47974 has 136 MA's), (38, 47845), (41, 47812), (44, 47797), (48, 47767), (49, 47764), (51, 47740), (54, 47710), (59, 47632), (62, 47584), (66, 47563), (68, 47542), (76, 47452), (80, 47416), (83, 47377), (84, 47365), (87, 47350), (90, 47338),

Gene: OSmaximus_56 Start: 48538, Stop: 47858, Start Num: 22

Candidate Starts for OSmaximus_56:

(3, 48790), (4, 48781), (5, 48757), (6, 48727), (8, 48676), (9, 48637), (Start: 19 @48547 has 9 MA's), (Start: 22 @48538 has 136 MA's), (41, 48376), (44, 48361), (49, 48328), (51, 48304), (54, 48274), (59, 48196), (62, 48148), (66, 48127), (68, 48106), (76, 48016), (80, 47980), (83, 47941), (84, 47929), (90, 47902),

Gene: Ogotogo_73 Start: 43850, Stop: 44527, Start Num: 23

Candidate Starts for Ogotogo_73:

(Start: 23 @43850 has 25 MA's), (28, 43892), (48, 44051), (49, 44054), (51, 44078), (54, 44108), (59, 44186), (62, 44234), (66, 44255), (76, 44366), (80, 44402), (83, 44441), (84, 44453),

Gene: Oksu_71 Start: 46299, Stop: 46976, Start Num: 23

Candidate Starts for Oksu_71:

(Start: 23 @46299 has 25 MA's), (28, 46341), (48, 46500), (49, 46503), (51, 46527), (54, 46557), (59, 46635), (62, 46683), (66, 46704), (76, 46815), (80, 46851), (83, 46890), (84, 46902),

Gene: Olive_54 Start: 47964, Stop: 47287, Start Num: 22

Candidate Starts for Olive_54:

(Start: 19 @47973 has 9 MA's), (Start: 22 @47964 has 136 MA's), (38, 47835), (41, 47802), (44, 47787), (48, 47757), (49, 47754), (51, 47730), (54, 47700), (59, 47622), (62, 47574), (66, 47553), (68, 47532), (76, 47442), (80, 47406), (83, 47367), (84, 47355), (90, 47328),

Gene: OliverWalter_54 Start: 47985, Stop: 47308, Start Num: 22

Candidate Starts for OliverWalter_54:

(Start: 19 @47994 has 9 MA's), (Start: 22 @47985 has 136 MA's), (41, 47823), (44, 47808), (49, 47775), (51, 47751), (54, 47721), (59, 47643), (62, 47595), (66, 47574), (68, 47553), (76, 47463), (80, 47427), (83, 47388), (84, 47376), (90, 47349),

Gene: Omniscient_56 Start: 48812, Stop: 48132, Start Num: 22

Candidate Starts for Omniscient_56:

(Start: 19 @48821 has 9 MA's), (Start: 22 @48812 has 136 MA's), (48, 48605), (49, 48602), (51, 48578), (54, 48548), (62, 48422), (66, 48401), (68, 48380), (76, 48290), (83, 48215), (84, 48203), (90, 48176),

Gene: Oosterbaan_55 Start: 48274, Stop: 47594, Start Num: 22

Candidate Starts for Oosterbaan_55:

(Start: 19 @48283 has 9 MA's), (Start: 22 @48274 has 136 MA's), (48, 48067), (49, 48064), (51, 48040), (54, 48010), (62, 47884), (66, 47863), (68, 47842), (76, 47752), (83, 47677), (84, 47665), (90, 47638),

Gene: PG1_56 Start: 48507, Stop: 47827, Start Num: 22

Candidate Starts for PG1_56:

(Start: 19 @48516 has 9 MA's), (Start: 22 @48507 has 136 MA's), (48, 48300), (49, 48297), (51, 48273), (54, 48243), (62, 48117), (66, 48096), (68, 48075), (76, 47985), (83, 47910), (84, 47898), (90, 47871),

Gene: Phareon_54 Start: 47671, Stop: 46994, Start Num: 22

Candidate Starts for Phareon_54:

(Start: 19 @47680 has 9 MA's), (Start: 22 @47671 has 136 MA's), (38, 47542), (41, 47509), (44, 47494), (48, 47464), (49, 47461), (51, 47437), (54, 47407), (59, 47329), (62, 47281), (66, 47260), (68, 47239), (76, 47149), (80, 47113), (83, 47074), (84, 47062), (87, 47047), (90, 47035),

Gene: PhatCats2014_56 Start: 48511, Stop: 47831, Start Num: 22

Candidate Starts for PhatCats2014_56:

(Start: 19 @48520 has 9 MA's), (Start: 22 @48511 has 136 MA's), (48, 48304), (49, 48301), (51, 48277), (54, 48247), (62, 48121), (66, 48100), (68, 48079), (76, 47989), (83, 47914), (84, 47902), (90, 47875),

Gene: Phatniss_64 Start: 42165, Stop: 42842, Start Num: 23

Candidate Starts for Phatniss_64:

(Start: 23 @42165 has 25 MA's), (28, 42207), (48, 42366), (49, 42369), (51, 42393), (54, 42423), (59, 42501), (62, 42549), (66, 42570), (76, 42681), (80, 42717), (83, 42756), (84, 42768),

Gene: Phomeo_9 Start: 5606, Stop: 6265, Start Num: 17

Candidate Starts for Phomeo_9:

(7, 5471), (13, 5579), (Start: 17 @5606 has 15 MA's), (47, 5807), (48, 5810), (55, 5867), (58, 5900), (66, 6011), (77, 6128), (87, 6218),

Gene: Phrappuccino_151 Start: 104613, Stop: 105200, Start Num: 27

Candidate Starts for Phrappuccino_151:

(8, 104412), (Start: 27 @104613 has 2 MA's), (34, 104661), (39, 104712), (46, 104757), (58, 104874), (59, 104913), (60, 104919), (63, 104964), (64, 104973), (69, 105012), (76, 105081), (77, 105084), (78, 105087),

Gene: Phunky_54 Start: 47968, Stop: 47291, Start Num: 22

Candidate Starts for Phunky_54:

(Start: 19 @47977 has 9 MA's), (Start: 22 @47968 has 136 MA's), (38, 47839), (41, 47806), (44, 47791), (48, 47761), (49, 47758), (51, 47734), (54, 47704), (59, 47626), (62, 47578), (66, 47557), (68, 47536), (76, 47446), (80, 47410), (83, 47371), (84, 47359), (87, 47344), (90, 47332),

Gene: Piglet_0055 Start: 48493, Stop: 47804, Start Num: 19

Candidate Starts for Piglet_0055:

(Start: 19 @48493 has 9 MA's), (Start: 22 @48484 has 136 MA's), (48, 48277), (49, 48274), (51, 48250), (54, 48220), (62, 48094), (66, 48073), (68, 48052), (76, 47962), (83, 47887), (84, 47875), (90, 47848),

Gene: PinheadLarry_56 Start: 48509, Stop: 47829, Start Num: 22

Candidate Starts for PinheadLarry_56:

(Start: 19 @48518 has 9 MA's), (Start: 22 @48509 has 136 MA's), (48, 48302), (49, 48299), (51, 48275), (54, 48245), (62, 48119), (66, 48098), (68, 48077), (76, 47987), (80, 47951), (83, 47912), (84, 47900), (90, 47873),

Gene: Pipsqueak_54 Start: 47997, Stop: 47320, Start Num: 22

Candidate Starts for Pipsqueak_54:

(Start: 19 @48006 has 9 MA's), (Start: 22 @47997 has 136 MA's), (48, 47790), (49, 47787), (51, 47763), (54, 47733), (62, 47607), (66, 47586), (68, 47565), (76, 47475), (80, 47439), (83, 47400), (84, 47388), (90, 47361),

Gene: Placalicious_55 Start: 48499, Stop: 47819, Start Num: 22

Candidate Starts for Placalicious_55:

(Start: 19 @48508 has 9 MA's), (Start: 22 @48499 has 136 MA's), (48, 48292), (49, 48289), (51, 48265), (54, 48235), (62, 48109), (66, 48088), (68, 48067), (76, 47977), (83, 47902), (84, 47890), (90, 47863),

Gene: Plmatters_54 Start: 47971, Stop: 47294, Start Num: 22

Candidate Starts for Plmatters_54:

(3, 48223), (4, 48214), (5, 48190), (6, 48160), (8, 48109), (9, 48070), (Start: 19 @47980 has 9 MA's), (Start: 22 @47971 has 136 MA's), (38, 47842), (41, 47809), (44, 47794), (48, 47764), (49, 47761), (51, 47737), (54, 47707), (59, 47629), (62, 47581), (66, 47560), (68, 47539), (76, 47449), (80, 47413), (83, 47374), (84, 47362), (87, 47347), (90, 47335),

Gene: Poenanya_66 Start: 43323, Stop: 44000, Start Num: 23

Candidate Starts for Poenanya_66:

(Start: 23 @43323 has 25 MA's), (28, 43365), (48, 43524), (49, 43527), (51, 43551), (54, 43581), (59, 43659), (62, 43707), (66, 43728), (76, 43839), (80, 43875), (83, 43914), (84, 43926),

Gene: Pops_54 Start: 47956, Stop: 47309, Start Num: 22

Candidate Starts for Pops_54:

(2, 48223), (3, 48208), (4, 48199), (5, 48175), (6, 48145), (8, 48094), (9, 48055), (Start: 19 @47965 has 9 MA's), (Start: 22 @47956 has 136 MA's), (30, 47899), (49, 47746), (51, 47722), (54, 47692), (62, 47566), (66, 47545), (68, 47524), (76, 47434), (83, 47389), (84, 47377), (90, 47350),

Gene: Posh_51 Start: 37991, Stop: 38596, Start Num: 23

Candidate Starts for Posh_51:

(Start: 23 @37991 has 25 MA's), (28, 38033), (54, 38228), (56, 38261), (59, 38309), (69, 38402), (77, 38471), (82, 38525),

Gene: Potter_54 Start: 48005, Stop: 47325, Start Num: 22

Candidate Starts for Potter_54:

(3, 48257), (4, 48248), (5, 48224), (6, 48194), (8, 48143), (9, 48104), (Start: 19 @48014 has 9 MA's), (Start: 22 @48005 has 136 MA's), (48, 47798), (49, 47795), (51, 47771), (54, 47741), (59, 47663), (62, 47615), (66, 47594), (76, 47483), (80, 47447), (83, 47408), (84, 47396), (90, 47369),

Gene: ProfessorX_54 Start: 47963, Stop: 47286, Start Num: 22

Candidate Starts for ProfessorX_54:

(Start: 19 @47972 has 9 MA's), (Start: 22 @47963 has 136 MA's), (48, 47756), (49, 47753), (51, 47729), (54, 47699), (59, 47621), (62, 47573), (66, 47552), (68, 47531), (76, 47441), (80, 47405), (83, 47366), (84, 47354), (90, 47327),

Gene: Puhltonio_55 Start: 48279, Stop: 47599, Start Num: 22

Candidate Starts for Puhltonio_55:

(3, 48531), (4, 48522), (5, 48498), (6, 48468), (8, 48417), (9, 48378), (Start: 19 @48288 has 9 MA's), (Start: 22 @48279 has 136 MA's), (48, 48072), (49, 48069), (51, 48045), (54, 48015), (59, 47937), (62, 47889), (66, 47868), (76, 47757), (80, 47721), (83, 47682), (84, 47670), (90, 47643),

Gene: QueenBeane_55 Start: 48269, Stop: 47589, Start Num: 22

Candidate Starts for QueenBeane_55:

(Start: 19 @48278 has 9 MA's), (Start: 22 @48269 has 136 MA's), (48, 48062), (49, 48059), (51, 48035), (54, 48005), (62, 47879), (66, 47858), (68, 47837), (76, 47747), (83, 47672), (84, 47660), (90, 47633),

Gene: Robyn_54 Start: 47908, Stop: 47228, Start Num: 22

Candidate Starts for Robyn_54:

(3, 48160), (4, 48151), (5, 48127), (6, 48097), (8, 48046), (9, 48007), (Start: 19 @47917 has 9 MA's), (Start: 22 @47908 has 136 MA's), (41, 47746), (44, 47731), (49, 47698), (51, 47674), (54, 47644), (59, 47566), (62, 47518), (66, 47497), (68, 47476), (76, 47386), (80, 47350), (83, 47311), (84, 47299), (90, 47272),

Gene: Roscoe_55 Start: 48208, Stop: 47531, Start Num: 22

Candidate Starts for Roscoe_55:

(Start: 19 @48217 has 9 MA's), (Start: 22 @48208 has 136 MA's), (38, 48079), (41, 48046), (44, 48031), (48, 48001), (49, 47998), (51, 47974), (54, 47944), (59, 47866), (62, 47818), (66, 47797), (68, 47776), (76, 47686), (80, 47650), (83, 47611), (84, 47599), (90, 47572),

Gene: Roy17_54 Start: 47662, Stop: 46985, Start Num: 22

Candidate Starts for Roy17_54:

(Start: 19 @47671 has 9 MA's), (Start: 22 @47662 has 136 MA's), (38, 47533), (41, 47500), (44, 47485), (48, 47455), (49, 47452), (51, 47428), (54, 47398), (59, 47320), (62, 47272), (66, 47251), (68, 47230), (76, 47140), (80, 47104), (83, 47065), (84, 47053), (87, 47038), (90, 47026),

Gene: Samaymay_55 Start: 48269, Stop: 47589, Start Num: 22

Candidate Starts for Samaymay_55:

(Start: 19 @48278 has 9 MA's), (Start: 22 @48269 has 136 MA's), (48, 48062), (49, 48059), (51, 48035), (54, 48005), (62, 47879), (66, 47858), (68, 47837), (76, 47747), (83, 47672), (84, 47660), (90, 47633),

Gene: SassyCat97_54 Start: 47996, Stop: 47316, Start Num: 22

Candidate Starts for SassyCat97_54:

(3, 48248), (4, 48239), (5, 48215), (6, 48185), (8, 48134), (9, 48095), (Start: 19 @48005 has 9 MA's), (Start: 22 @47996 has 136 MA's), (48, 47789), (49, 47786), (51, 47762), (54, 47732), (59, 47654), (62, 47606), (66, 47585), (76, 47474), (80, 47438), (83, 47399), (84, 47387), (90, 47360),

Gene: Schadenfreude_54 Start: 47755, Stop: 47078, Start Num: 22

Candidate Starts for Schadenfreude_54:

(Start: 19 @47764 has 9 MA's), (Start: 22 @47755 has 136 MA's), (41, 47593), (44, 47578), (49, 47545), (51, 47521), (54, 47491), (59, 47413), (62, 47365), (66, 47344), (68, 47323), (76, 47233), (80, 47197), (83, 47158), (84, 47146), (88, 47125), (90, 47119),

Gene: Serendipity_55 Start: 48293, Stop: 47613, Start Num: 22

Candidate Starts for Serendipity_55:

(3, 48545), (4, 48536), (5, 48512), (6, 48482), (8, 48431), (9, 48392), (Start: 19 @48302 has 9 MA's), (Start: 22 @48293 has 136 MA's), (48, 48086), (49, 48083), (51, 48059), (54, 48029), (59, 47951), (62, 47903), (66, 47882), (76, 47771), (80, 47735), (83, 47696), (84, 47684), (90, 47657),

Gene: Serpentine_0055 Start: 48376, Stop: 47696, Start Num: 22

Candidate Starts for Serpentine_0055:

(Start: 19 @48385 has 9 MA's), (Start: 22 @48376 has 136 MA's), (48, 48169), (49, 48166), (51, 48142), (54, 48112), (62, 47986), (66, 47965), (68, 47944), (76, 47854), (83, 47779), (84, 47767), (90, 47740),

Gene: Settecandela_151 Start: 104613, Stop: 105200, Start Num: 27

Candidate Starts for Settecandela_151:

(8, 104412), (Start: 27 @104613 has 2 MA's), (34, 104661), (39, 104712), (46, 104757), (58, 104874), (59, 104913), (60, 104919), (63, 104964), (64, 104973), (69, 105012), (76, 105081), (77, 105084), (78, 105087),

Gene: SilverBell_54 Start: 48014, Stop: 47337, Start Num: 22

Candidate Starts for SilverBell_54:

(Start: 19 @48023 has 9 MA's), (Start: 22 @48014 has 136 MA's), (48, 47807), (49, 47804), (51, 47780), (54, 47750), (62, 47624), (66, 47603), (68, 47582), (76, 47492), (80, 47456), (83, 47417), (84, 47405), (90, 47378),

Gene: Soile_56 Start: 48517, Stop: 47837, Start Num: 22

Candidate Starts for Soile_56:

(Start: 19 @48526 has 9 MA's), (Start: 22 @48517 has 136 MA's), (48, 48310), (49, 48307), (51, 48283), (54, 48253), (62, 48127), (66, 48106), (68, 48085), (76, 47995), (83, 47920), (84, 47908), (90, 47881),

Gene: Solosis_54 Start: 47999, Stop: 47310, Start Num: 19

Candidate Starts for Solosis_54:

(3, 48242), (4, 48233), (5, 48209), (6, 48179), (8, 48128), (9, 48089), (Start: 19 @47999 has 9 MA's), (Start: 22 @47990 has 136 MA's), (48, 47783), (49, 47780), (51, 47756), (54, 47726), (59, 47648), (62, 47600), (66, 47579), (76, 47468), (80, 47432), (83, 47393), (84, 47381), (90, 47354),

Gene: Sophia_54 Start: 47993, Stop: 47304, Start Num: 19

Candidate Starts for Sophia_54:

(3, 48236), (4, 48227), (5, 48203), (6, 48173), (8, 48122), (9, 48083), (Start: 19 @47993 has 9 MA's), (Start: 22 @47984 has 136 MA's), (48, 47777), (49, 47774), (51, 47750), (54, 47720), (62, 47594), (66, 47573), (68, 47552), (76, 47462), (80, 47426), (83, 47387), (84, 47375), (90, 47348),

Gene: Sparkdehlily_73 Start: 43625, Stop: 44299, Start Num: 23

Candidate Starts for Sparkdehlily_73:

(Start: 23 @43625 has 25 MA's), (28, 43667), (48, 43826), (49, 43829), (51, 43853), (54, 43883), (59, 43961), (62, 44009), (66, 44030), (76, 44141), (80, 44177), (83, 44216), (84, 44228),

Gene: Sparky_63 Start: 43334, Stop: 44023, Start Num: 19

Candidate Starts for Sparky_63:

(12, 43268), (Start: 19 @43334 has 9 MA's), (32, 43418), (49, 43550), (51, 43574), (54, 43604), (68, 43775), (83, 43937), (84, 43949), (90, 43976),

Gene: Spartacus_68 Start: 42822, Stop: 43505, Start Num: 18

Candidate Starts for Spartacus_68:

(Start: 18 @42822 has 1 MA's), (32, 42900), (42, 42990), (49, 43032), (51, 43056), (54, 43086), (68, 43257), (83, 43419), (84, 43431),

Gene: Spartan300_54 Start: 47968, Stop: 47291, Start Num: 22

Candidate Starts for Spartan300_54:

(Start: 19 @47977 has 9 MA's), (Start: 22 @47968 has 136 MA's), (38, 47839), (41, 47806), (44, 47791), (48, 47761), (49, 47758), (51, 47734), (54, 47704), (59, 47626), (62, 47578), (66, 47557), (68, 47536), (76, 47446), (80, 47410), (83, 47371), (84, 47359), (90, 47332),

Gene: Squid_55 Start: 47996, Stop: 47316, Start Num: 22

Candidate Starts for Squid_55:

(3, 48248), (4, 48239), (5, 48215), (6, 48185), (8, 48134), (9, 48095), (Start: 19 @48005 has 9 MA's), (Start: 22 @47996 has 136 MA's), (48, 47789), (49, 47786), (51, 47762), (54, 47732), (59, 47654), (62, 47606), (66, 47585), (76, 47474), (80, 47438), (83, 47399), (84, 47387), (90, 47360),

Gene: Surely_55 Start: 48286, Stop: 47606, Start Num: 22

Candidate Starts for Surely_55:

(3, 48538), (4, 48529), (5, 48505), (6, 48475), (8, 48424), (9, 48385), (Start: 19 @48295 has 9 MA's), (Start: 22 @48286 has 136 MA's), (48, 48079), (49, 48076), (51, 48052), (54, 48022), (59, 47944), (62, 47896), (66, 47875), (76, 47764), (80, 47728), (83, 47689), (84, 47677), (90, 47650),

Gene: TDanisky_73 Start: 43625, Stop: 44299, Start Num: 23

Candidate Starts for TDanisky_73:

(Start: 23 @43625 has 25 MA's), (28, 43667), (48, 43826), (49, 43829), (51, 43853), (54, 43883), (59, 43961), (62, 44009), (66, 44030), (76, 44141), (80, 44177), (83, 44216), (84, 44228),

Gene: TPA4_59 Start: 41974, Stop: 42615, Start Num: 15

Candidate Starts for TPA4_59:

(11, 41911), (14, 41968), (15, 41974), (28, 42043), (31, 42064), (40, 42154), (48, 42193), (54, 42238), (59, 42301), (69, 42400), (77, 42490), (79, 42520), (83, 42553), (86, 42577),

Gene: Taj_71 Start: 44380, Stop: 45054, Start Num: 23

Candidate Starts for Taj_71:

(Start: 23 @44380 has 25 MA's), (28, 44422), (48, 44581), (49, 44584), (51, 44608), (54, 44638), (59, 44716), (62, 44764), (66, 44785), (76, 44896), (80, 44932), (83, 44971), (84, 44983),

Gene: TallGrassMM_55 Start: 47900, Stop: 47220, Start Num: 22

Candidate Starts for TallGrassMM_55:

(3, 48152), (4, 48143), (5, 48119), (6, 48089), (8, 48038), (9, 47999), (Start: 19 @47909 has 9 MA's), (Start: 22 @47900 has 136 MA's), (48, 47693), (49, 47690), (51, 47666), (54, 47636), (59, 47558), (62, 47510), (66, 47489), (76, 47378), (80, 47342), (83, 47303), (84, 47291), (90, 47264),

Gene: Telesworld_53 Start: 48063, Stop: 47170, Start Num: 22

Candidate Starts for Telesworld_53:

(3, 48315), (4, 48306), (5, 48282), (6, 48252), (8, 48201), (9, 48162), (Start: 19 @48072 has 9 MA's), (Start: 22 @48063 has 136 MA's), (48, 47856), (49, 47853), (51, 47829), (54, 47799), (59, 47721), (62, 47673), (66, 47652), (68, 47631), (76, 47541), (83, 47466), (84, 47454), (94, 47385),

Gene: Thora_55 Start: 48282, Stop: 47602, Start Num: 22

Candidate Starts for Thora_55:

(Start: 19 @48291 has 9 MA's), (Start: 22 @48282 has 136 MA's), (48, 48075), (49, 48072), (51, 48048), (54, 48018), (62, 47892), (66, 47871), (68, 47850), (76, 47760), (83, 47685), (84, 47673), (90, 47646),

Gene: ThreeOh3D2_56 Start: 48502, Stop: 47822, Start Num: 22

Candidate Starts for ThreeOh3D2_56:

(Start: 19 @48511 has 9 MA's), (Start: 22 @48502 has 136 MA's), (48, 48295), (49, 48292), (51, 48268), (54, 48238), (62, 48112), (66, 48091), (68, 48070), (76, 47980), (83, 47905), (84, 47893), (90, 47866),

Gene: Timmi_54 Start: 47985, Stop: 47305, Start Num: 22

Candidate Starts for Timmi_54:

(3, 48237), (4, 48228), (5, 48204), (6, 48174), (8, 48123), (9, 48084), (Start: 19 @47994 has 9 MA's), (Start: 22 @47985 has 136 MA's), (48, 47778), (49, 47775), (51, 47751), (54, 47721), (59, 47643), (62, 47595), (66, 47574), (76, 47463), (80, 47427), (83, 47388), (84, 47376), (90, 47349),

Gene: TomBombadil_55 Start: 48270, Stop: 47590, Start Num: 22

Candidate Starts for TomBombadil_55:

(3, 48522), (4, 48513), (5, 48489), (6, 48459), (8, 48408), (9, 48369), (Start: 19 @48279 has 9 MA's), (Start: 22 @48270 has 136 MA's), (48, 48063), (49, 48060), (51, 48036), (54, 48006), (59, 47928), (62, 47880), (66, 47859), (76, 47748), (80, 47712), (83, 47673), (84, 47661), (90, 47634),

Gene: Tomlarah_56 Start: 48797, Stop: 48117, Start Num: 22

Candidate Starts for Tomlarah_56:

(Start: 19 @48806 has 9 MA's), (Start: 22 @48797 has 136 MA's), (48, 48590), (49, 48587), (51, 48563), (54, 48533), (62, 48407), (66, 48386), (68, 48365), (76, 48275), (83, 48200), (84, 48188), (90, 48161),

Gene: Tootsieroll_66 Start: 42088, Stop: 42765, Start Num: 23

Candidate Starts for Tootsieroll_66:

(Start: 23 @42088 has 25 MA's), (28, 42130), (48, 42289), (49, 42292), (51, 42316), (54, 42346), (59, 42424), (62, 42472), (66, 42493), (76, 42604), (80, 42640), (83, 42679), (84, 42691),

Gene: Toron_74 Start: 45951, Stop: 46631, Start Num: 16

Candidate Starts for Toron_74:

(16, 45951), (28, 46008), (31, 46026), (32, 46035), (42, 46125), (49, 46167), (51, 46191), (54, 46221), (68, 46392), (83, 46554), (84, 46566), (89, 46590), (90, 46593),

Gene: Tracker_10 Start: 5745, Stop: 6419, Start Num: 17

Candidate Starts for Tracker_10:

(7, 5610), (13, 5718), (Start: 17 @5745 has 15 MA's), (47, 5946), (48, 5949), (55, 6006), (58, 6039), (66, 6150), (77, 6267), (87, 6357),

Gene: UAch1_54 Start: 48022, Stop: 47345, Start Num: 22

Candidate Starts for UAch1_54:

(3, 48274), (4, 48265), (5, 48241), (6, 48211), (8, 48160), (9, 48121), (Start: 19 @48031 has 9 MA's), (Start: 22 @48022 has 136 MA's), (41, 47860), (44, 47845), (49, 47812), (51, 47788), (54, 47758), (59, 47680), (62, 47632), (66, 47611), (68, 47590), (76, 47500), (80, 47464), (83, 47425), (84, 47413), (90, 47386),

Gene: UncleHowie_54 Start: 47697, Stop: 47020, Start Num: 22

Candidate Starts for UncleHowie_54:

(Start: 19 @47706 has 9 MA's), (Start: 22 @47697 has 136 MA's), (48, 47490), (49, 47487), (51, 47463), (54, 47433), (62, 47307), (66, 47286), (68, 47265), (76, 47175), (80, 47139), (83, 47100), (84, 47088), (90, 47061),

Gene: UncleRicky_65 Start: 42413, Stop: 43090, Start Num: 23

Candidate Starts for UncleRicky_65:

(Start: 23 @42413 has 25 MA's), (28, 42455), (48, 42614), (49, 42617), (51, 42641), (54, 42671), (59, 42749), (62, 42797), (66, 42818), (76, 42929), (80, 42965), (83, 43004), (84, 43016),

Gene: Usavi_55 Start: 48365, Stop: 47685, Start Num: 22

Candidate Starts for Usavi_55:

(Start: 19 @48374 has 9 MA's), (Start: 22 @48365 has 136 MA's), (48, 48158), (49, 48155), (51, 48131), (54, 48101), (62, 47975), (66, 47954), (68, 47933), (76, 47843), (83, 47768), (84, 47756), (90, 47729),

Gene: Vaishali24_53 Start: 47657, Stop: 46980, Start Num: 22

Candidate Starts for Vaishali24_53:

(3, 47909), (4, 47900), (5, 47876), (6, 47846), (8, 47795), (9, 47756), (Start: 19 @47666 has 9 MA's), (Start: 22 @47657 has 136 MA's), (41, 47495), (44, 47480), (49, 47447), (51, 47423), (54, 47393), (59, 47315), (62, 47267), (66, 47246), (68, 47225), (76, 47135), (80, 47099), (83, 47060), (84, 47048), (90, 47021),

Gene: Valjean_54 Start: 47978, Stop: 47301, Start Num: 22

Candidate Starts for Valjean_54:

(Start: 19 @47987 has 9 MA's), (Start: 22 @47978 has 136 MA's), (38, 47849), (41, 47816), (44, 47801), (48, 47771), (49, 47768), (51, 47744), (54, 47714), (59, 47636), (62, 47588), (66, 47567), (68, 47546), (76, 47456), (80, 47420), (83, 47381), (84, 47369), (90, 47342),

Gene: Vaticameos_52 Start: 46488, Stop: 45808, Start Num: 22

Candidate Starts for Vaticameos_52:

(Start: 19 @46497 has 9 MA's), (Start: 22 @46488 has 136 MA's), (48, 46281), (49, 46278), (51, 46254), (54, 46224), (62, 46098), (66, 46077), (68, 46056), (76, 45966), (83, 45891), (84, 45879), (90, 45852),

Gene: Vista_54 Start: 47998, Stop: 47321, Start Num: 22

Candidate Starts for Vista_54:

(3, 48250), (4, 48241), (5, 48217), (6, 48187), (8, 48136), (9, 48097), (Start: 19 @48007 has 9 MA's), (Start: 22 @47998 has 136 MA's), (48, 47791), (49, 47788), (51, 47764), (54, 47734), (62, 47608), (66, 47587), (68, 47566), (76, 47476), (80, 47440), (83, 47401), (84, 47389), (90, 47362),

Gene: Vortex_55 Start: 47980, Stop: 47300, Start Num: 22

Candidate Starts for Vortex_55:

(3, 48232), (4, 48223), (5, 48199), (6, 48169), (8, 48118), (9, 48079), (Start: 19 @47989 has 9 MA's), (Start: 22 @47980 has 136 MA's), (48, 47773), (49, 47770), (51, 47746), (54, 47716), (59, 47638), (62, 47590), (66, 47569), (76, 47458), (80, 47422), (83, 47383), (84, 47371), (90, 47344),

Gene: Waterdiva_55 Start: 48359, Stop: 47679, Start Num: 22

Candidate Starts for Waterdiva_55:

(Start: 19 @48368 has 9 MA's), (Start: 22 @48359 has 136 MA's), (48, 48152), (49, 48149), (51, 48125), (54, 48095), (62, 47969), (66, 47948), (68, 47927), (76, 47837), (83, 47762), (84, 47750), (90, 47723),

Gene: Wee_71 Start: 44456, Stop: 45130, Start Num: 23

Candidate Starts for Wee_71:

(Start: 23 @44456 has 25 MA's), (28, 44498), (48, 44657), (49, 44660), (51, 44684), (54, 44714), (59, 44792), (62, 44840), (66, 44861), (76, 44972), (80, 45008), (83, 45047), (84, 45059),

Gene: Weher20_55 Start: 48803, Stop: 48123, Start Num: 22

Candidate Starts for Weher20_55:

(Start: 19 @48812 has 9 MA's), (Start: 22 @48803 has 136 MA's), (48, 48596), (49, 48593), (51, 48569), (54, 48539), (62, 48413), (66, 48392), (68, 48371), (76, 48281), (83, 48206), (84, 48194), (90, 48167),

Gene: Wheezy_10 Start: 6003, Stop: 6677, Start Num: 17

Candidate Starts for Wheezy_10:

(7, 5868), (13, 5976), (Start: 17 @6003 has 15 MA's), (47, 6204), (48, 6207), (55, 6264), (58, 6297), (66, 6408), (77, 6525), (87, 6615),

Gene: WillSterrel_67 Start: 43939, Stop: 44616, Start Num: 23

Candidate Starts for WillSterrel_67:

(Start: 23 @43939 has 25 MA's), (28, 43981), (48, 44140), (49, 44143), (51, 44167), (54, 44197), (59, 44275), (62, 44323), (66, 44344), (76, 44455), (80, 44491), (83, 44530), (84, 44542),

Gene: Windsor_55 Start: 48503, Stop: 47823, Start Num: 22

Candidate Starts for Windsor_55:

(Start: 19 @48512 has 9 MA's), (Start: 22 @48503 has 136 MA's), (48, 48296), (49, 48293), (51, 48269), (54, 48239), (62, 48113), (66, 48092), (68, 48071), (76, 47981), (83, 47906), (84, 47894), (90, 47867),

Gene: Xavier_54 Start: 47996, Stop: 47307, Start Num: 19

Candidate Starts for Xavier_54:

(3, 48239), (4, 48230), (5, 48206), (6, 48176), (8, 48125), (9, 48086), (Start: 19 @47996 has 9 MA's), (Start: 22 @47987 has 136 MA's), (48, 47780), (49, 47777), (51, 47753), (54, 47723), (59, 47645), (62,

47597), (66, 47576), (76, 47465), (80, 47429), (83, 47390), (84, 47378), (90, 47351),

Gene: Zaider_55 Start: 48222, Stop: 47545, Start Num: 22

Candidate Starts for Zaider_55:

(Start: 19 @48231 has 9 MA's), (Start: 22 @48222 has 136 MA's), (38, 48093), (41, 48060), (44, 48045), (48, 48015), (49, 48012), (51, 47988), (54, 47958), (59, 47880), (62, 47832), (66, 47811), (68, 47790), (76, 47700), (80, 47664), (83, 47625), (84, 47613), (90, 47586),

Gene: Zelda_55 Start: 48324, Stop: 47644, Start Num: 22

Candidate Starts for Zelda_55:

(2, 48591), (3, 48576), (4, 48567), (5, 48543), (6, 48513), (8, 48462), (9, 48423), (Start: 19 @48333 has 9 MA's), (Start: 22 @48324 has 136 MA's), (48, 48117), (49, 48114), (51, 48090), (54, 48060), (62, 47934), (66, 47913), (68, 47892), (76, 47802), (83, 47727), (84, 47715), (90, 47688),

Gene: Zenteno07_58 Start: 47935, Stop: 47234, Start Num: 19

Candidate Starts for Zenteno07_58:

(1, 48472), (12, 48004), (Start: 19 @47935 has 9 MA's), (Start: 23 @47920 has 25 MA's), (25, 47890), (54, 47668), (58, 47632), (67, 47506), (72, 47437), (84, 47308), (85, 47302), (90, 47281),