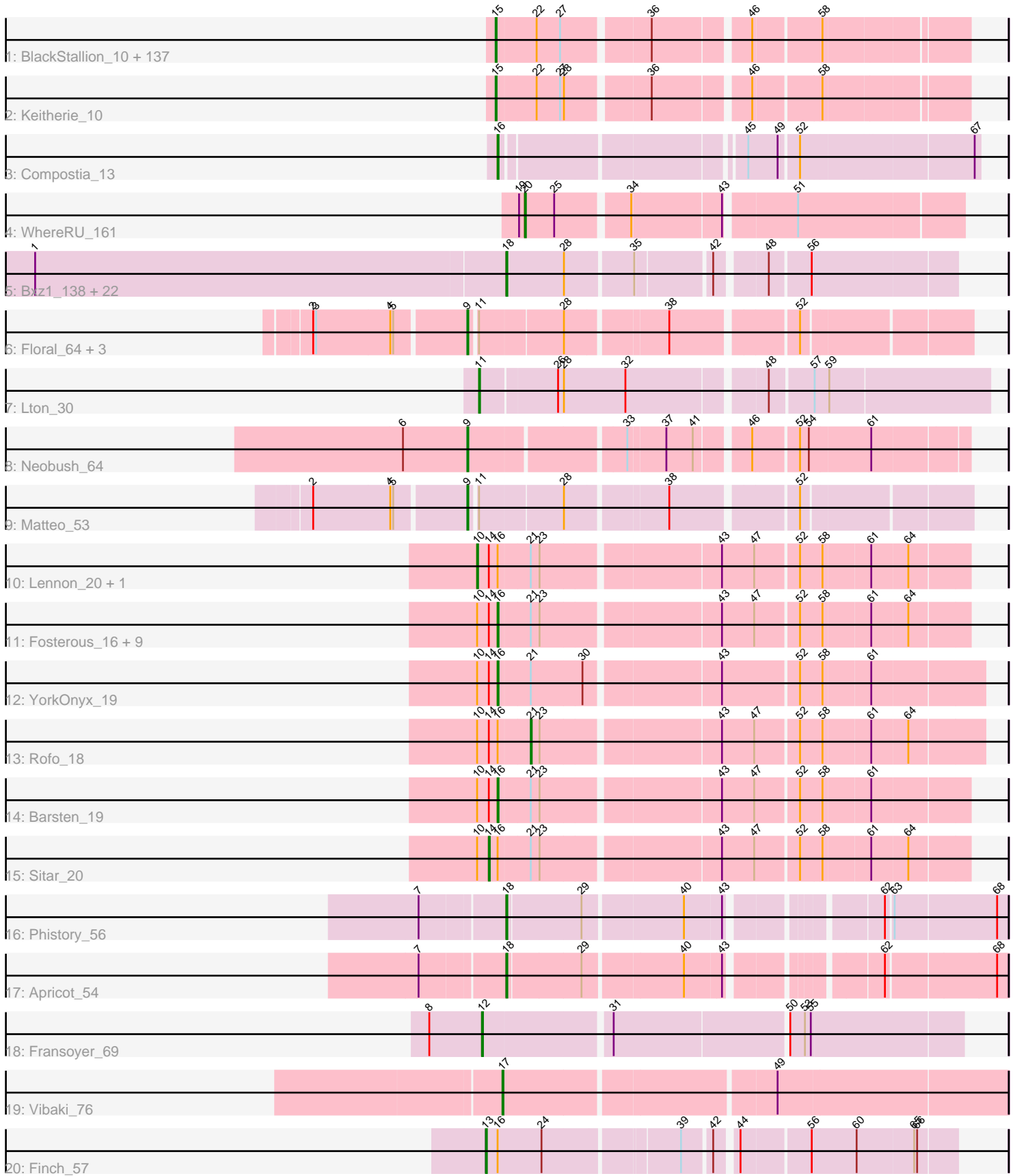


Pham 193755



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 193755 Report

This analysis was run 11/02/24 on database version 579.

Pham number 193755 has 192 members, 0 are drafts.

Phages represented in each track:

- Track 1 : BlackStallion_10, Pops_10, Puhltonio_10, Durga_10, Sigman_10, Chunky_10, Riggan_10, Soto_10, Inchworm_10, HSavage_10, Omniscient_10, SDcharge11_10, Lego3393_10, Zaider_11, Mesh1_10, CampRoach_10, Swish_10, Dingo_10, Etaye_10, Fringe_10, Haimas_10, TomBombadil_10, Oosterbaan_10, Quisquilliae_10, DirtJuice_10, Anderson_10, Roliet_10, JacAttac_10, Phipps_10, Harvey_10, Pherdinand_10, Phamished_10, OliverWalter_10, Tomlarah_10, Andre_10, Waterdiva_10, Matalotodo_10, FluffyNinja_10, PhrodoBaggins_105, Surely_10, Yoshand_10, Chah_10, LeeLot_10, Hetaeria_10, Inverness_10, Slatt_10, Hertubise_10, AltPhacts_10, Vivaldi_10, Craff_10, Zelda_10, Plmatters_10, Buckeye_10, EmpTee_10, Melc17_10, Newman_10, KLucky39_10, Kikipoo_10, Badfish_10, Frankicide_10, Cannibal_10, FriarPreacher_10, Scoot17C_10, Adriana_10, Nacho_0010, Lasso_10, Thora_10, Valjean_10, CheetO_10, Hartsy_10, Spartan300_10, Sheila_10, LasagnaCat_10, Virapocalypse_10, Pipsqueak_10, Samaymay_10, CamL_10, Morty_10, GeneCoco_10, Eremos_10, Roscoe_11, Basato_11, Tooj_10, Katniss_10, Daka_10, Fang_10, Weher20_10, Serpentine_0010, ABU_10, KlimbOn_10, BlueHusk_10, Hamish_10, Prickles_10, Gyarad_0010, Suffolk_10, Iridoclysis_10, Mikota_10, Orion_10, MiniBoss_10, OSmaximus_10, Lulwa_10, Colbert_10, UAch1_10, Trypo_10, Vista_10, Gophee_10, Emiris_10, ThreeOh3D2_10, Kailash_10, Charles1_10, Horchata_10, ProfessorX_10, PG1_10, Megatron_10, Cobra_10, Skippy_10, Usavi_10, QueenBeane_10, Magic8_10, PhatLouie_10, Podrick_10, Phunky_10, Zonia_10, Nicole21_10, YouGoGlencoco_10, Boehler_10, Eugenia_10, ShiVal_10, Murdoc_10, Olive_10, JangoPhett_10, IsaacEli_10, Kloppinator_10, KingVeVeVe_10, DoesntMatter_10, PhatCats2014_10, Numberten_10, Serendipity_10
- Track 2 : Keitherie_10
- Track 3 : Compostia_13
- Track 4 : WhereRU_161
- Track 5 : Bxz1_138, Mangeria_141, LRRHood_134, Cane17_133, Lukilu_131, Pio_145, Jessibeth14_140, Shaqnato_134, Fludd_142, Burrough_141, Breeniome_140, Shelob_143, MikeLiesIn_142, Phox_138, Teardrop_140, LolaVinca_141, HyRo_132, ChickenPhender_137, Cali_136, CharlieB_138, Rabinovish_140, Koguma_138, Shifa_130
- Track 6 : Floral_64, EMSquaredA_63, Pollux_66, Marteena_62
- Track 7 : Lton_30
- Track 8 : Neobush_64
- Track 9 : Matteo_53
- Track 10 : Lennon_20, Vivi2_18

- Track 11 : Fosterous_16, Love_20, Paries_19, BobBob_16, Galadriel_20, Bibwit_19, Tangent_16, Keitabear_20, Charming_16, Nordenberg_13
- Track 12 : YorkOnyx_19
- Track 13 : Rofo_18
- Track 14 : Barsten_19
- Track 15 : Sitar_20
- Track 16 : Phistory_56
- Track 17 : Apricot_54
- Track 18 : Fransoyer_69
- Track 19 : Vibaki_76
- Track 20 : Finch_57

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

The start number called the most often in the published annotations is 15, it was called in 139 of the 192 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- ABU_10, Adriana_10, AltPhacts_10, Anderson_10, Andre_10, Badfish_10, Basato_11, BlackStallion_10, BlueHusk_10, Boehler_10, Buckeye_10, CamL_10, CampRoach_10, Cannibal_10, Chah_10, Charles1_10, CheetO_10, Chunky_10, Cobra_10, Colbert_10, Craff_10, Daka_10, Dingo_10, DirtJuice_10, DoesntMatter_10, Durga_10, Emiris_10, EmpTee_10, Eremos_10, Etaye_10, Eugenia_10, Fang_10, FluffyNinja_10, Frankicide_10, FriarPreacher_10, Fringe_10, GeneCoco_10, Gophee_10, Gyarad_0010, HSavage_10, Haimas_10, Hamish_10, Hartsy_10, Harvey_10, Hertubise_10, Hetaeria_10, Horchata_10, Inchworm_10, Inverness_10, Iridoclysis_10, IsaacEli_10, JacAttac_10, JangoPhett_10, KLucky39_10, Kailash_10, Katniss_10, Keitherie_10, Kikipoo_10, KingVeVeVe_10, KlimbOn_10, Kloppinator_10, LasagnaCat_10, Lasso_10, LeeLot_10, Lego3393_10, Lulwa_10, Magic8_10, Matalotodo_10, Megatron_10, Melc17_10, Mesh1_10, Mikota_10, MiniBoss_10, Morty_10, Murdoc_10, Nacho_0010, Newman_10, Nicole21_10, Numberten_10, OSmaximus_10, Olive_10, OliverWalter_10, Omniscient_10, Oosterbaan_10, Orion_10, PG1_10, Phamished_10, PhatCats2014_10, PhatLouie_10, Pherdinand_10, Phipps_10, PhrodoBaggins_105, Phunky_10, Pipsqueak_10, Plmatters_10, Podrick_10, Pops_10, Prickles_10, ProfessorX_10, Puhltonio_10, QueenBeane_10, Quisquiliae_10, Riggan_10, Roliet_10, Roscoe_11, SDcharge11_10, Samaymay_10, Scoot17C_10, Serendipity_10, Serpentine_0010, Sheila_10, ShiVal_10, Sigman_10, Skippy_10, Slatt_10, Soto_10, Spartan300_10, Suffolk_10, Surely_10, Swish_10, Thora_10, ThreeOh3D2_10, TomBombadil_10, Tomlarah_10, Tooj_10, Trypo_10, UAch1_10, Usavi_10, Valjean_10, Virapocalypse_10, Vista_10, Vivaldi_10, Waterdiva_10, Weher20_10, Yoshand_10, YouGoGlencoco_10, Zaider_11, Zelda_10, Zonia_10,

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

-

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

- Apricot_54, Barsten_19, Bibwit_19, BobBob_16, Breeniome_140, Burrough_141, Bxz1_138, Cali_136, Cane17_133, CharlieB_138, Charming_16, ChickenPhender_137, Compostia_13, EMSquaredA_63, Finch_57, Floral_64,

Fludd_142, Fosterous_16, Fransoyer_69, Galadriel_20, HyRo_132, Jessibeth14_140, Keitabear_20, Koguma_138, LRRHood_134, Lennon_20, LolaVinca_141, Love_20, Lton_30, Lukilu_131, Mangeria_141, Marteena_62, Matteo_53, MikeLiesIn_142, Neobush_64, Nordenberg_13, Paries_19, Phistory_56, Phox_138, Pio_145, Pollux_66, Rabinovish_140, Rofo_18, Shaqnato_134, Shelob_143, Shifa_130, Sitar_20, Tangent_16, Teardrop_140, Vibaki_76, Vivi2_18, WhereRU_161, YorkOnyx_19,

Summary by start number:

Start 9:

- Found in 6 of 192 (3.1%) of genes in pham
- Manual Annotations of this start: 6 of 192
- Called 100.0% of time when present
- Phage (with cluster) where this start called: EMSquaredA_63 (CY1), Floral_64 (CY1), Marteena_62 (CY1), Matteo_53 (CZ2), Neobush_64 (CZ1), Pollux_66 (CY1),

Start 10:

- Found in 16 of 192 (8.3%) of genes in pham
- Manual Annotations of this start: 2 of 192
- Called 12.5% of time when present
- Phage (with cluster) where this start called: Lennon_20 (DE1), Vivi2_18 (DE1),

Start 11:

- Found in 6 of 192 (3.1%) of genes in pham
- Manual Annotations of this start: 1 of 192
- Called 16.7% of time when present
- Phage (with cluster) where this start called: Lton_30 (CZ),

Start 12:

- Found in 1 of 192 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 192
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Fransoyer_69 (EG),

Start 13:

- Found in 1 of 192 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 192
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Finch_57 (singleton),

Start 14:

- Found in 16 of 192 (8.3%) of genes in pham
- Manual Annotations of this start: 1 of 192
- Called 6.2% of time when present
- Phage (with cluster) where this start called: Sitar_20 (DE1),

Start 15:

- Found in 139 of 192 (72.4%) of genes in pham
- Manual Annotations of this start: 139 of 192
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ABU_10 (B1), Adriana_10 (B1), AltPhacts_10 (B1), Anderson_10 (B1), Andre_10 (B1), Badfish_10 (B1), Basato_11

(B1), BlackStallion_10 (B1), BlueHusk_10 (B1), Boehler_10 (B1), Buckeye_10 (B1), CamL_10 (B1), CampRoach_10 (B1), Cannibal_10 (B1), Chah_10 (B1), Charles1_10 (B1), CheetO_10 (B1), Chunky_10 (B1), Cobra_10 (B1), Colbert_10 (B1), Craff_10 (B1), Daka_10 (B1), Dingo_10 (B1), DirtJuice_10 (B1), DoesntMatter_10 (B1), Durga_10 (B1), Emiris_10 (B1), EmpTee_10 (B1), Eremos_10 (B1), Etaye_10 (B1), Eugenia_10 (B1), Fang_10 (B1), FluffyNinja_10 (B1), Frankicide_10 (B1), FriarPreacher_10 (B1), Fringe_10 (B1), GeneCoco_10 (B1), Gophee_10 (B1), Gyarad_0010 (B1), HSavage_10 (B1), Haimas_10 (B1), Hamish_10 (B1), Hartsy_10 (B1), Harvey_10 (B1), Hertubise_10 (B1), Hetaeria_10 (B1), Horchata_10 (B1), Inchworm_10 (B1), Inverness_10 (B1), Iridoclysis_10 (B1), IsaacEli_10 (B1), JacAttac_10 (B1), JangoPhett_10 (B1), KLucky39_10 (B1), Kailash_10 (B1), Katniss_10 (B1), Keitherie_10 (B1), Kikipoo_10 (B1), KingVeVeVe_10 (B1), KlimbOn_10 (B1), Kloppinator_10 (B1), LasagnaCat_10 (B1), Lasso_10 (B1), LeeLot_10 (B1), Lego3393_10 (B1), Lulwa_10 (B1), Magic8_10 (B1), Matalotodo_10 (B1), Megatron_10 (B1), Melc17_10 (B1), Mesh1_10 (B1), Mikota_10 (B1), MiniBoss_10 (B1), Morty_10 (B1), Murdoc_10 (B1), Nacho_0010 (B1), Newman_10 (B1), Nicole21_10 (B1), Numberten_10 (B1), OSmaximus_10 (B1), Olive_10 (B1), OliverWalter_10 (B1), Omniscient_10 (B1), Oosterbaan_10 (B1), Orion_10 (B1), PG1_10 (B1), Phamished_10 (B1), PhatCats2014_10 (B1), PhatLouie_10 (B1), Pherdinand_10 (B1), Phipps_10 (B1), PhrodoBaggins_105 (B1), Phunky_10 (B1), Pipsqueak_10 (B1), Plmatters_10 (B1), Podrick_10 (B1), Pops_10 (B1), Prickles_10 (B1), ProfessorX_10 (B1), Puhltonio_10 (B1), QueenBeane_10 (B1), Quisquilliae_10 (B1), Riggan_10 (B1), Roliet_10 (B1), Roscoe_11 (B1), SDcharge11_10 (B1), Samaymay_10 (B1), Scoot17C_10 (B1), Serendipity_10 (B1), Serpentine_0010 (B1), Sheila_10 (B1), ShiVal_10 (B1), Sigman_10 (B1), Skippy_10 (B1), Slatt_10 (B1), Soto_10 (B1), Spartan300_10 (B1), Suffolk_10 (B1), Surely_10 (B1), Swish_10 (B1), Thora_10 (B1), ThreeOh3D2_10 (B1), TomBombadil_10 (B1), Tomlarah_10 (B1), Tooj_10 (B1), Trypo_10 (B1), UAch1_10 (B1), Usavi_10 (B1), Valjean_10 (B1), Virapocalypse_10 (B1), Vista_10 (B1), Vivaldi_10 (B1), Waterdiva_10 (B1), Weher20_10 (B1), Yoshand_10 (B1), YouGoGlencoco_10 (B1), Zaider_11 (B1), Zelda_10 (B1), Zonia_10 (B1),

Start 16:

- Found in 18 of 192 (9.4%) of genes in pham
- Manual Annotations of this start: 13 of 192
- Called 72.2% of time when present
- Phage (with cluster) where this start called: Barsten_19 (DE1), Bibwit_19 (DE1), BobBob_16 (DE1), Charming_16 (DE1), Compostia_13 (B3), Fosterous_16 (DE1), Galadriel_20 (DE1), Keitabear_20 (DE1), Love_20 (DE1), Nordenberg_13 (DE1), Paries_19 (DE1), Tangent_16 (DE1), YorkOnyx_19 (DE1),

Start 17:

- Found in 1 of 192 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 192
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Vibaki_76 (FL),

Start 18:

- Found in 25 of 192 (13.0%) of genes in pham
- Manual Annotations of this start: 25 of 192
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Apricot_54 (DN3), Breeniome_140 (C1), Burrough_141 (C1), Bxz1_138 (C1), Cali_136 (C1), Cane17_133 (C1), CharlieB_138

(C1), ChickenPhender_137 (C1), Fludd_142 (C1), HyRo_132 (C1), Jessibeth14_140 (C1), Koguma_138 (C1), LRRHood_134 (C1), LolaVinca_141 (C1), Lukilu_131 (C1), Mangeria_141 (C1), MikeLiesIn_142 (C1), Phistory_56 (DN1), Phox_138 (C1), Pio_145 (C1), Rabinovish_140 (C1), Shaqnato_134 (C1), Shelob_143 (C1), Shifa_130 (C1), Teardrop_140 (C1),

Start 20:

- Found in 1 of 192 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 192
- Called 100.0% of time when present
- Phage (with cluster) where this start called: WhereRU_161 (BE1),

Start 21:

- Found in 16 of 192 (8.3%) of genes in pham
- Manual Annotations of this start: 1 of 192
- Called 6.2% of time when present
- Phage (with cluster) where this start called: Rofo_18 (DE1),

Summary by clusters:

There are 14 clusters represented in this pham: CY1, CZ2, DE1, EG, CZ1, singleton, CZ, DN1, B1, DN3, B3, C1, BE1, FL,

Info for manual annotations of cluster B1:

- Start number 15 was manually annotated 139 times for cluster B1.

Info for manual annotations of cluster B3:

- Start number 16 was manually annotated 1 time for cluster B3.

Info for manual annotations of cluster BE1:

- Start number 20 was manually annotated 1 time for cluster BE1.

Info for manual annotations of cluster C1:

- Start number 18 was manually annotated 23 times for cluster C1.

Info for manual annotations of cluster CY1:

- Start number 9 was manually annotated 4 times for cluster CY1.

Info for manual annotations of cluster CZ:

- Start number 11 was manually annotated 1 time for cluster CZ.

Info for manual annotations of cluster CZ1:

- Start number 9 was manually annotated 1 time for cluster CZ1.

Info for manual annotations of cluster CZ2:

- Start number 9 was manually annotated 1 time for cluster CZ2.

Info for manual annotations of cluster DE1:

- Start number 10 was manually annotated 2 times for cluster DE1.
- Start number 14 was manually annotated 1 time for cluster DE1.
- Start number 16 was manually annotated 12 times for cluster DE1.
- Start number 21 was manually annotated 1 time for cluster DE1.

Info for manual annotations of cluster DN1:

- Start number 18 was manually annotated 1 time for cluster DN1.

Info for manual annotations of cluster DN3:

- Start number 18 was manually annotated 1 time for cluster DN3.

Info for manual annotations of cluster EG:

- Start number 12 was manually annotated 1 time for cluster EG.

Info for manual annotations of cluster FL:

- Start number 17 was manually annotated 1 time for cluster FL.

Gene Information:

Gene: ABU_10 Start: 8941, Stop: 9375, Start Num: 15

Candidate Starts for ABU_10:

(Start: 15 @8941 has 139 MA's), (22, 8980), (27, 9004), (36, 9085), (46, 9175), (58, 9238),

Gene: Adriana_10 Start: 8943, Stop: 9377, Start Num: 15

Candidate Starts for Adriana_10:

(Start: 15 @8943 has 139 MA's), (22, 8982), (27, 9006), (36, 9087), (46, 9177), (58, 9240),

Gene: AltPhacts_10 Start: 8944, Stop: 9378, Start Num: 15

Candidate Starts for AltPhacts_10:

(Start: 15 @8944 has 139 MA's), (22, 8983), (27, 9007), (36, 9088), (46, 9178), (58, 9241),

Gene: Anderson_10 Start: 8943, Stop: 9377, Start Num: 15

Candidate Starts for Anderson_10:

(Start: 15 @8943 has 139 MA's), (22, 8982), (27, 9006), (36, 9087), (46, 9177), (58, 9240),

Gene: Andre_10 Start: 8944, Stop: 9378, Start Num: 15

Candidate Starts for Andre_10:

(Start: 15 @8944 has 139 MA's), (22, 8983), (27, 9007), (36, 9088), (46, 9178), (58, 9241),

Gene: Apricot_54 Start: 35119, Stop: 35568, Start Num: 18

Candidate Starts for Apricot_54:

(7, 35038), (Start: 18 @35119 has 25 MA's), (29, 35191), (40, 35287), (43, 35323), (62, 35452), (68, 35557),

Gene: Badfish_10 Start: 8943, Stop: 9377, Start Num: 15

Candidate Starts for Badfish_10:

(Start: 15 @8943 has 139 MA's), (22, 8982), (27, 9006), (36, 9087), (46, 9177), (58, 9240),

Gene: Barsten_19 Start: 14612, Stop: 15058, Start Num: 16

Candidate Starts for Barsten_19:

(Start: 10 @14591 has 2 MA's), (Start: 14 @14603 has 1 MA's), (Start: 16 @14612 has 13 MA's), (Start: 21 @14642 has 1 MA's), (23, 14651), (43, 14822), (47, 14855), (52, 14897), (58, 14918), (61, 14963),

Gene: Basato_11 Start: 9177, Stop: 9611, Start Num: 15

Candidate Starts for Basato_11:

(Start: 15 @9177 has 139 MA's), (22, 9216), (27, 9240), (36, 9321), (46, 9411), (58, 9474),

Gene: Bibwit_19 Start: 14856, Stop: 15302, Start Num: 16

Candidate Starts for Bibwit_19:

(Start: 10 @14835 has 2 MA's), (Start: 14 @14847 has 1 MA's), (Start: 16 @14856 has 13 MA's), (Start: 21 @14886 has 1 MA's), (23, 14895), (43, 15066), (47, 15099), (52, 15141), (58, 15162), (61, 15207), (64, 15243),

Gene: BlackStallion_10 Start: 8941, Stop: 9375, Start Num: 15

Candidate Starts for BlackStallion_10:

(Start: 15 @8941 has 139 MA's), (22, 8980), (27, 9004), (36, 9085), (46, 9175), (58, 9238),

Gene: BlueHusk_10 Start: 8940, Stop: 9374, Start Num: 15

Candidate Starts for BlueHusk_10:

(Start: 15 @8940 has 139 MA's), (22, 8979), (27, 9003), (36, 9084), (46, 9174), (58, 9237),

Gene: BobBob_16 Start: 13466, Stop: 13912, Start Num: 16

Candidate Starts for BobBob_16:

(Start: 10 @13445 has 2 MA's), (Start: 14 @13457 has 1 MA's), (Start: 16 @13466 has 13 MA's), (Start: 21 @13496 has 1 MA's), (23, 13505), (43, 13676), (47, 13709), (52, 13751), (58, 13772), (61, 13817), (64, 13853),

Gene: Boehler_10 Start: 8943, Stop: 9377, Start Num: 15

Candidate Starts for Boehler_10:

(Start: 15 @8943 has 139 MA's), (22, 8982), (27, 9006), (36, 9087), (46, 9177), (58, 9240),

Gene: Breeniome_140 Start: 81159, Stop: 81575, Start Num: 18

Candidate Starts for Breeniome_140:

(1, 80682), (Start: 18 @81159 has 25 MA's), (28, 81216), (35, 81279), (42, 81348), (48, 81393), (56, 81432),

Gene: Buckeye_10 Start: 8945, Stop: 9379, Start Num: 15

Candidate Starts for Buckeye_10:

(Start: 15 @8945 has 139 MA's), (22, 8984), (27, 9008), (36, 9089), (46, 9179), (58, 9242),

Gene: Burrough_141 Start: 83310, Stop: 83726, Start Num: 18

Candidate Starts for Burrough_141:

(1, 82833), (Start: 18 @83310 has 25 MA's), (28, 83367), (35, 83430), (42, 83499), (48, 83544), (56, 83583),

Gene: Bxz1_138 Start: 84513, Stop: 84929, Start Num: 18

Candidate Starts for Bxz1_138:

(1, 84036), (Start: 18 @84513 has 25 MA's), (28, 84570), (35, 84633), (42, 84702), (48, 84747), (56, 84786),

Gene: Cali_136 Start: 83312, Stop: 83728, Start Num: 18

Candidate Starts for Cali_136:

(1, 82835), (Start: 18 @83312 has 25 MA's), (28, 83369), (35, 83432), (42, 83501), (48, 83546), (56, 83585),

Gene: CamL_10 Start: 8940, Stop: 9374, Start Num: 15

Candidate Starts for CamL_10:

(Start: 15 @8940 has 139 MA's), (22, 8979), (27, 9003), (36, 9084), (46, 9174), (58, 9237),

Gene: CampRoach_10 Start: 8940, Stop: 9374, Start Num: 15

Candidate Starts for CampRoach_10:

(Start: 15 @8940 has 139 MA's), (22, 8979), (27, 9003), (36, 9084), (46, 9174), (58, 9237),

Gene: Cane17_133 Start: 84174, Stop: 84590, Start Num: 18

Candidate Starts for Cane17_133:

(1, 83697), (Start: 18 @84174 has 25 MA's), (28, 84231), (35, 84294), (42, 84363), (48, 84408), (56, 84447),

Gene: Cannibal_10 Start: 8943, Stop: 9377, Start Num: 15

Candidate Starts for Cannibal_10:

(Start: 15 @8943 has 139 MA's), (22, 8982), (27, 9006), (36, 9087), (46, 9177), (58, 9240),

Gene: Chah_10 Start: 8941, Stop: 9375, Start Num: 15

Candidate Starts for Chah_10:

(Start: 15 @8941 has 139 MA's), (22, 8980), (27, 9004), (36, 9085), (46, 9175), (58, 9238),

Gene: Charles1_10 Start: 8943, Stop: 9377, Start Num: 15

Candidate Starts for Charles1_10:

(Start: 15 @8943 has 139 MA's), (22, 8982), (27, 9006), (36, 9087), (46, 9177), (58, 9240),

Gene: CharlieB_138 Start: 82195, Stop: 82611, Start Num: 18

Candidate Starts for CharlieB_138:

(1, 81718), (Start: 18 @82195 has 25 MA's), (28, 82252), (35, 82315), (42, 82384), (48, 82429), (56, 82468),

Gene: Charming_16 Start: 13468, Stop: 13914, Start Num: 16

Candidate Starts for Charming_16:

(Start: 10 @13447 has 2 MA's), (Start: 14 @13459 has 1 MA's), (Start: 16 @13468 has 13 MA's), (Start: 21 @13498 has 1 MA's), (23, 13507), (43, 13678), (47, 13711), (52, 13753), (58, 13774), (61, 13819), (64, 13855),

Gene: CheetO_10 Start: 8943, Stop: 9377, Start Num: 15

Candidate Starts for CheetO_10:

(Start: 15 @8943 has 139 MA's), (22, 8982), (27, 9006), (36, 9087), (46, 9177), (58, 9240),

Gene: ChickenPhender_137 Start: 81501, Stop: 81917, Start Num: 18

Candidate Starts for ChickenPhender_137:

(1, 81024), (Start: 18 @81501 has 25 MA's), (28, 81558), (35, 81621), (42, 81690), (48, 81735), (56, 81774),

Gene: Chunky_10 Start: 8943, Stop: 9377, Start Num: 15

Candidate Starts for Chunky_10:

(Start: 15 @8943 has 139 MA's), (22, 8982), (27, 9006), (36, 9087), (46, 9177), (58, 9240),

Gene: Cobra_10 Start: 8940, Stop: 9374, Start Num: 15

Candidate Starts for Cobra_10:

(Start: 15 @8940 has 139 MA's), (22, 8979), (27, 9003), (36, 9084), (46, 9174), (58, 9237),

Gene: Colbert_10 Start: 8940, Stop: 9374, Start Num: 15

Candidate Starts for Colbert_10:

(Start: 15 @8940 has 139 MA's), (22, 8979), (27, 9003), (36, 9084), (46, 9174), (58, 9237),

Gene: Compostia_13 Start: 10667, Stop: 11107, Start Num: 16

Candidate Starts for Compostia_13:

(Start: 16 @10667 has 13 MA's), (45, 10889), (49, 10919), (52, 10937), (67, 11102),

Gene: Craff_10 Start: 8943, Stop: 9377, Start Num: 15

Candidate Starts for Craff_10:

(Start: 15 @8943 has 139 MA's), (22, 8982), (27, 9006), (36, 9087), (46, 9177), (58, 9240),

Gene: Daka_10 Start: 8946, Stop: 9380, Start Num: 15

Candidate Starts for Daka_10:

(Start: 15 @8946 has 139 MA's), (22, 8985), (27, 9009), (36, 9090), (46, 9180), (58, 9243),

Gene: Dingo_10 Start: 8940, Stop: 9374, Start Num: 15

Candidate Starts for Dingo_10:

(Start: 15 @8940 has 139 MA's), (22, 8979), (27, 9003), (36, 9084), (46, 9174), (58, 9237),

Gene: DirtJuice_10 Start: 8943, Stop: 9377, Start Num: 15

Candidate Starts for DirtJuice_10:

(Start: 15 @8943 has 139 MA's), (22, 8982), (27, 9006), (36, 9087), (46, 9177), (58, 9240),

Gene: DoesntMatter_10 Start: 8940, Stop: 9374, Start Num: 15

Candidate Starts for DoesntMatter_10:

(Start: 15 @8940 has 139 MA's), (22, 8979), (27, 9003), (36, 9084), (46, 9174), (58, 9237),

Gene: Durga_10 Start: 8957, Stop: 9391, Start Num: 15

Candidate Starts for Durga_10:

(Start: 15 @8957 has 139 MA's), (22, 8996), (27, 9020), (36, 9101), (46, 9191), (58, 9254),

Gene: EMSquaredA_63 Start: 42816, Stop: 43277, Start Num: 9

Candidate Starts for EMSquaredA_63:

(2, 42666), (3, 42669), (4, 42744), (5, 42747), (Start: 9 @42816 has 6 MA's), (Start: 11 @42822 has 1 MA's), (28, 42903), (38, 42999), (52, 43116),

Gene: Emiris_10 Start: 8944, Stop: 9378, Start Num: 15

Candidate Starts for Emiris_10:

(Start: 15 @8944 has 139 MA's), (22, 8983), (27, 9007), (36, 9088), (46, 9178), (58, 9241),

Gene: EmpTee_10 Start: 8944, Stop: 9378, Start Num: 15

Candidate Starts for EmpTee_10:

(Start: 15 @8944 has 139 MA's), (22, 8983), (27, 9007), (36, 9088), (46, 9178), (58, 9241),

Gene: Eremos_10 Start: 8937, Stop: 9371, Start Num: 15

Candidate Starts for Eremos_10:

(Start: 15 @8937 has 139 MA's), (22, 8976), (27, 9000), (36, 9081), (46, 9171), (58, 9234),

Gene: Etaye_10 Start: 8940, Stop: 9374, Start Num: 15

Candidate Starts for Etaye_10:

(Start: 15 @8940 has 139 MA's), (22, 8979), (27, 9003), (36, 9084), (46, 9174), (58, 9237),

Gene: Eugenia_10 Start: 8944, Stop: 9378, Start Num: 15

Candidate Starts for Eugenia_10:

(Start: 15 @8944 has 139 MA's), (22, 8983), (27, 9007), (36, 9088), (46, 9178), (58, 9241),

Gene: Fang_10 Start: 8944, Stop: 9378, Start Num: 15

Candidate Starts for Fang_10:

(Start: 15 @8944 has 139 MA's), (22, 8983), (27, 9007), (36, 9088), (46, 9178), (58, 9241),

Gene: Finch_57 Start: 47485, Stop: 47922, Start Num: 13

Candidate Starts for Finch_57:

(Start: 13 @47485 has 1 MA's), (Start: 16 @47497 has 13 MA's), (24, 47542), (39, 47668), (42, 47695), (44, 47713), (56, 47779), (60, 47824), (65, 47881), (66, 47884),

Gene: Floral_64 Start: 44701, Stop: 45162, Start Num: 9

Candidate Starts for Floral_64:

(2, 44551), (3, 44554), (4, 44629), (5, 44632), (Start: 9 @44701 has 6 MA's), (Start: 11 @44707 has 1 MA's), (28, 44788), (38, 44884), (52, 45001),

Gene: Fludd_142 Start: 82309, Stop: 82725, Start Num: 18

Candidate Starts for Fludd_142:

(1, 81832), (Start: 18 @82309 has 25 MA's), (28, 82366), (35, 82429), (42, 82498), (48, 82543), (56, 82582),

Gene: FluffyNinja_10 Start: 8941, Stop: 9375, Start Num: 15

Candidate Starts for FluffyNinja_10:

(Start: 15 @8941 has 139 MA's), (22, 8980), (27, 9004), (36, 9085), (46, 9175), (58, 9238),

Gene: Fosterous_16 Start: 14357, Stop: 14803, Start Num: 16

Candidate Starts for Fosterous_16:

(Start: 10 @14336 has 2 MA's), (Start: 14 @14348 has 1 MA's), (Start: 16 @14357 has 13 MA's), (Start: 21 @14387 has 1 MA's), (23, 14396), (43, 14567), (47, 14600), (52, 14642), (58, 14663), (61, 14708), (64, 14744),

Gene: Frankicide_10 Start: 8945, Stop: 9379, Start Num: 15

Candidate Starts for Frankicide_10:

(Start: 15 @8945 has 139 MA's), (22, 8984), (27, 9008), (36, 9089), (46, 9179), (58, 9242),

Gene: Fransoyer_69 Start: 49557, Stop: 49093, Start Num: 12

Candidate Starts for Fransoyer_69:

(8, 49611), (Start: 12 @49557 has 1 MA's), (31, 49434), (50, 49263), (53, 49248), (55, 49242),

Gene: FriarPreacher_10 Start: 8946, Stop: 9380, Start Num: 15

Candidate Starts for FriarPreacher_10:

(Start: 15 @8946 has 139 MA's), (22, 8985), (27, 9009), (36, 9090), (46, 9180), (58, 9243),

Gene: Fringe_10 Start: 8941, Stop: 9375, Start Num: 15

Candidate Starts for Fringe_10:

(Start: 15 @8941 has 139 MA's), (22, 8980), (27, 9004), (36, 9085), (46, 9175), (58, 9238),

Gene: Galadriel_20 Start: 14216, Stop: 14662, Start Num: 16

Candidate Starts for Galadriel_20:

(Start: 10 @14195 has 2 MA's), (Start: 14 @14207 has 1 MA's), (Start: 16 @14216 has 13 MA's), (Start: 21 @14246 has 1 MA's), (23, 14255), (43, 14426), (47, 14459), (52, 14501), (58, 14522), (61, 14567), (64, 14603),

Gene: GeneCoco_10 Start: 8949, Stop: 9383, Start Num: 15

Candidate Starts for GeneCoco_10:

(Start: 15 @8949 has 139 MA's), (22, 8988), (27, 9012), (36, 9093), (46, 9183), (58, 9246),

Gene: Gophee_10 Start: 8943, Stop: 9377, Start Num: 15

Candidate Starts for Gophee_10:

(Start: 15 @8943 has 139 MA's), (22, 8982), (27, 9006), (36, 9087), (46, 9177), (58, 9240),

Gene: Gyarad_0010 Start: 8943, Stop: 9377, Start Num: 15

Candidate Starts for Gyarad_0010:

(Start: 15 @8943 has 139 MA's), (22, 8982), (27, 9006), (36, 9087), (46, 9177), (58, 9240),

Gene: HSavage_10 Start: 8945, Stop: 9379, Start Num: 15

Candidate Starts for HSavage_10:

(Start: 15 @8945 has 139 MA's), (22, 8984), (27, 9008), (36, 9089), (46, 9179), (58, 9242),

Gene: Haimas_10 Start: 8943, Stop: 9377, Start Num: 15

Candidate Starts for Haimas_10:

(Start: 15 @8943 has 139 MA's), (22, 8982), (27, 9006), (36, 9087), (46, 9177), (58, 9240),

Gene: Hamish_10 Start: 8943, Stop: 9377, Start Num: 15

Candidate Starts for Hamish_10:

(Start: 15 @8943 has 139 MA's), (22, 8982), (27, 9006), (36, 9087), (46, 9177), (58, 9240),

Gene: Hartsy_10 Start: 8940, Stop: 9374, Start Num: 15

Candidate Starts for Hartsy_10:

(Start: 15 @8940 has 139 MA's), (22, 8979), (27, 9003), (36, 9084), (46, 9174), (58, 9237),

Gene: Harvey_10 Start: 8944, Stop: 9378, Start Num: 15

Candidate Starts for Harvey_10:

(Start: 15 @8944 has 139 MA's), (22, 8983), (27, 9007), (36, 9088), (46, 9178), (58, 9241),

Gene: Hertubise_10 Start: 8943, Stop: 9377, Start Num: 15

Candidate Starts for Hertubise_10:

(Start: 15 @8943 has 139 MA's), (22, 8982), (27, 9006), (36, 9087), (46, 9177), (58, 9240),

Gene: Hetaeria_10 Start: 8943, Stop: 9377, Start Num: 15

Candidate Starts for Hetaeria_10:

(Start: 15 @8943 has 139 MA's), (22, 8982), (27, 9006), (36, 9087), (46, 9177), (58, 9240),

Gene: Horchata_10 Start: 8942, Stop: 9376, Start Num: 15

Candidate Starts for Horchata_10:

(Start: 15 @8942 has 139 MA's), (22, 8981), (27, 9005), (36, 9086), (46, 9176), (58, 9239),

Gene: HyRo_132 Start: 82234, Stop: 82650, Start Num: 18

Candidate Starts for HyRo_132:

(1, 81757), (Start: 18 @82234 has 25 MA's), (28, 82291), (35, 82354), (42, 82423), (48, 82468), (56, 82507),

Gene: Inchworm_10 Start: 8940, Stop: 9374, Start Num: 15

Candidate Starts for Inchworm_10:

(Start: 15 @8940 has 139 MA's), (22, 8979), (27, 9003), (36, 9084), (46, 9174), (58, 9237),

Gene: Inverness_10 Start: 8945, Stop: 9379, Start Num: 15

Candidate Starts for Inverness_10:

(Start: 15 @8945 has 139 MA's), (22, 8984), (27, 9008), (36, 9089), (46, 9179), (58, 9242),

Gene: Iridoclysis_10 Start: 8947, Stop: 9381, Start Num: 15

Candidate Starts for Iridoclysis_10:

(Start: 15 @8947 has 139 MA's), (22, 8986), (27, 9010), (36, 9091), (46, 9181), (58, 9244),

Gene: IsaacEli_10 Start: 8940, Stop: 9374, Start Num: 15

Candidate Starts for IsaacEli_10:

(Start: 15 @8940 has 139 MA's), (22, 8979), (27, 9003), (36, 9084), (46, 9174), (58, 9237),

Gene: JacAttac_10 Start: 8940, Stop: 9374, Start Num: 15

Candidate Starts for JacAttac_10:

(Start: 15 @8940 has 139 MA's), (22, 8979), (27, 9003), (36, 9084), (46, 9174), (58, 9237),

Gene: JangoPhett_10 Start: 8941, Stop: 9375, Start Num: 15

Candidate Starts for JangoPhett_10:

(Start: 15 @8941 has 139 MA's), (22, 8980), (27, 9004), (36, 9085), (46, 9175), (58, 9238),

Gene: Jessibeth14_140 Start: 83080, Stop: 83496, Start Num: 18

Candidate Starts for Jessibeth14_140:

(1, 82603), (Start: 18 @83080 has 25 MA's), (28, 83137), (35, 83200), (42, 83269), (48, 83314), (56, 83353),

Gene: KLucky39_10 Start: 8943, Stop: 9377, Start Num: 15

Candidate Starts for KLucky39_10:

(Start: 15 @8943 has 139 MA's), (22, 8982), (27, 9006), (36, 9087), (46, 9177), (58, 9240),

Gene: Kailash_10 Start: 8952, Stop: 9386, Start Num: 15

Candidate Starts for Kailash_10:

(Start: 15 @8952 has 139 MA's), (22, 8991), (27, 9015), (36, 9096), (46, 9186), (58, 9249),

Gene: Katniss_10 Start: 8944, Stop: 9378, Start Num: 15

Candidate Starts for Katniss_10:

(Start: 15 @8944 has 139 MA's), (22, 8983), (27, 9007), (36, 9088), (46, 9178), (58, 9241),

Gene: Keitabear_20 Start: 16560, Stop: 17006, Start Num: 16

Candidate Starts for Keitabear_20:

(Start: 10 @16539 has 2 MA's), (Start: 14 @16551 has 1 MA's), (Start: 16 @16560 has 13 MA's), (Start: 21 @16590 has 1 MA's), (23, 16599), (43, 16770), (47, 16803), (52, 16845), (58, 16866), (61, 16911), (64, 16947),

Gene: Keitherie_10 Start: 8957, Stop: 9391, Start Num: 15

Candidate Starts for Keitherie_10:

(Start: 15 @8957 has 139 MA's), (22, 8996), (27, 9020), (28, 9023), (36, 9101), (46, 9191), (58, 9254),

Gene: Kikipoo_10 Start: 8940, Stop: 9374, Start Num: 15

Candidate Starts for Kikipoo_10:

(Start: 15 @8940 has 139 MA's), (22, 8979), (27, 9003), (36, 9084), (46, 9174), (58, 9237),

Gene: KingVeVeVe_10 Start: 8944, Stop: 9378, Start Num: 15

Candidate Starts for KingVeVeVe_10:

(Start: 15 @8944 has 139 MA's), (22, 8983), (27, 9007), (36, 9088), (46, 9178), (58, 9241),

Gene: KlimbOn_10 Start: 8943, Stop: 9377, Start Num: 15

Candidate Starts for KlimbOn_10:

(Start: 15 @8943 has 139 MA's), (22, 8982), (27, 9006), (36, 9087), (46, 9177), (58, 9240),

Gene: Kloppinator_10 Start: 8941, Stop: 9375, Start Num: 15

Candidate Starts for Kloppinator_10:

(Start: 15 @8941 has 139 MA's), (22, 8980), (27, 9004), (36, 9085), (46, 9175), (58, 9238),

Gene: Koguma_138 Start: 80718, Stop: 81134, Start Num: 18

Candidate Starts for Koguma_138:

(1, 80241), (Start: 18 @80718 has 25 MA's), (28, 80775), (35, 80838), (42, 80907), (48, 80952), (56, 80991),

Gene: LRRHood_134 Start: 82526, Stop: 82942, Start Num: 18

Candidate Starts for LRRHood_134:

(1, 82049), (Start: 18 @82526 has 25 MA's), (28, 82583), (35, 82646), (42, 82715), (48, 82760), (56, 82799),

Gene: LasagnaCat_10 Start: 8952, Stop: 9386, Start Num: 15

Candidate Starts for LasagnaCat_10:

(Start: 15 @8952 has 139 MA's), (22, 8991), (27, 9015), (36, 9096), (46, 9186), (58, 9249),

Gene: Lasso_10 Start: 8943, Stop: 9377, Start Num: 15

Candidate Starts for Lasso_10:

(Start: 15 @8943 has 139 MA's), (22, 8982), (27, 9006), (36, 9087), (46, 9177), (58, 9240),

Gene: LeeLot_10 Start: 8943, Stop: 9377, Start Num: 15

Candidate Starts for LeeLot_10:

(Start: 15 @8943 has 139 MA's), (22, 8982), (27, 9006), (36, 9087), (46, 9177), (58, 9240),

Gene: Lego3393_10 Start: 8941, Stop: 9375, Start Num: 15

Candidate Starts for Lego3393_10:

(Start: 15 @8941 has 139 MA's), (22, 8980), (27, 9004), (36, 9085), (46, 9175), (58, 9238),

Gene: Lennon_20 Start: 15643, Stop: 16110, Start Num: 10

Candidate Starts for Lennon_20:

(Start: 10 @15643 has 2 MA's), (Start: 14 @15655 has 1 MA's), (Start: 16 @15664 has 13 MA's), (Start: 21 @15694 has 1 MA's), (23, 15703), (43, 15874), (47, 15907), (52, 15949), (58, 15970), (61, 16015), (64, 16051),

Gene: LolaVinca_141 Start: 83494, Stop: 83910, Start Num: 18

Candidate Starts for LolaVinca_141:

(1, 83017), (Start: 18 @83494 has 25 MA's), (28, 83551), (35, 83614), (42, 83683), (48, 83728), (56, 83767),

Gene: Love_20 Start: 14527, Stop: 14973, Start Num: 16

Candidate Starts for Love_20:

(Start: 10 @14506 has 2 MA's), (Start: 14 @14518 has 1 MA's), (Start: 16 @14527 has 13 MA's), (Start: 21 @14557 has 1 MA's), (23, 14566), (43, 14737), (47, 14770), (52, 14812), (58, 14833), (61, 14878), (64, 14914),

Gene: Lton_30 Start: 23640, Stop: 24134, Start Num: 11

Candidate Starts for Lton_30:

(Start: 11 @23640 has 1 MA's), (26, 23715), (28, 23721), (32, 23784), (48, 23916), (57, 23958), (59, 23973),

Gene: Lukilu_131 Start: 83536, Stop: 83952, Start Num: 18

Candidate Starts for Lukilu_131:

(1, 83059), (Start: 18 @83536 has 25 MA's), (28, 83593), (35, 83656), (42, 83725), (48, 83770), (56, 83809),

Gene: Lulwa_10 Start: 8943, Stop: 9377, Start Num: 15

Candidate Starts for Lulwa_10:

(Start: 15 @8943 has 139 MA's), (22, 8982), (27, 9006), (36, 9087), (46, 9177), (58, 9240),

Gene: Magic8_10 Start: 8940, Stop: 9374, Start Num: 15

Candidate Starts for Magic8_10:

(Start: 15 @8940 has 139 MA's), (22, 8979), (27, 9003), (36, 9084), (46, 9174), (58, 9237),

Gene: Mangeria_141 Start: 83337, Stop: 83753, Start Num: 18

Candidate Starts for Mangeria_141:

(1, 82860), (Start: 18 @83337 has 25 MA's), (28, 83394), (35, 83457), (42, 83526), (48, 83571), (56, 83610),

Gene: Marteena_62 Start: 42816, Stop: 43277, Start Num: 9

Candidate Starts for Marteena_62:

(2, 42666), (3, 42669), (4, 42744), (5, 42747), (Start: 9 @42816 has 6 MA's), (Start: 11 @42822 has 1 MA's), (28, 42903), (38, 42999), (52, 43116),

Gene: Matalotodo_10 Start: 8944, Stop: 9378, Start Num: 15

Candidate Starts for Matalotodo_10:

(Start: 15 @8944 has 139 MA's), (22, 8983), (27, 9007), (36, 9088), (46, 9178), (58, 9241),

Gene: Matteo_53 Start: 35852, Stop: 36313, Start Num: 9

Candidate Starts for Matteo_53:

(2, 35702), (4, 35780), (5, 35783), (Start: 9 @35852 has 6 MA's), (Start: 11 @35858 has 1 MA's), (28, 35939), (38, 36035), (52, 36152),

Gene: Megatron_10 Start: 8940, Stop: 9374, Start Num: 15

Candidate Starts for Megatron_10:

(Start: 15 @8940 has 139 MA's), (22, 8979), (27, 9003), (36, 9084), (46, 9174), (58, 9237),

Gene: Melc17_10 Start: 8940, Stop: 9374, Start Num: 15

Candidate Starts for Melc17_10:

(Start: 15 @8940 has 139 MA's), (22, 8979), (27, 9003), (36, 9084), (46, 9174), (58, 9237),

Gene: Mesh1_10 Start: 8943, Stop: 9377, Start Num: 15

Candidate Starts for Mesh1_10:

(Start: 15 @8943 has 139 MA's), (22, 8982), (27, 9006), (36, 9087), (46, 9177), (58, 9240),

Gene: MikeLiesIn_142 Start: 83297, Stop: 83713, Start Num: 18

Candidate Starts for MikeLiesIn_142:

(1, 82820), (Start: 18 @83297 has 25 MA's), (28, 83354), (35, 83417), (42, 83486), (48, 83531), (56, 83570),

Gene: Mikota_10 Start: 8941, Stop: 9375, Start Num: 15

Candidate Starts for Mikota_10:

(Start: 15 @8941 has 139 MA's), (22, 8980), (27, 9004), (36, 9085), (46, 9175), (58, 9238),

Gene: MiniBoss_10 Start: 8943, Stop: 9377, Start Num: 15

Candidate Starts for MiniBoss_10:

(Start: 15 @8943 has 139 MA's), (22, 8982), (27, 9006), (36, 9087), (46, 9177), (58, 9240),

Gene: Morty_10 Start: 8940, Stop: 9374, Start Num: 15

Candidate Starts for Morty_10:

(Start: 15 @8940 has 139 MA's), (22, 8979), (27, 9003), (36, 9084), (46, 9174), (58, 9237),

Gene: Murdoc_10 Start: 8943, Stop: 9377, Start Num: 15

Candidate Starts for Murdoc_10:

(Start: 15 @8943 has 139 MA's), (22, 8982), (27, 9006), (36, 9087), (46, 9177), (58, 9240),

Gene: Nacho_0010 Start: 8943, Stop: 9377, Start Num: 15

Candidate Starts for Nacho_0010:

(Start: 15 @8943 has 139 MA's), (22, 8982), (27, 9006), (36, 9087), (46, 9177), (58, 9240),

Gene: Neobush_64 Start: 42273, Stop: 42734, Start Num: 9

Candidate Starts for Neobush_64:

(6, 42207), (Start: 9 @42273 has 6 MA's), (33, 42420), (37, 42456), (41, 42483), (46, 42531), (52, 42573), (54, 42582), (61, 42642),

Gene: Newman_10 Start: 8943, Stop: 9377, Start Num: 15

Candidate Starts for Newman_10:

(Start: 15 @8943 has 139 MA's), (22, 8982), (27, 9006), (36, 9087), (46, 9177), (58, 9240),

Gene: Nicole21_10 Start: 8941, Stop: 9375, Start Num: 15

Candidate Starts for Nicole21_10:

(Start: 15 @8941 has 139 MA's), (22, 8980), (27, 9004), (36, 9085), (46, 9175), (58, 9238),

Gene: Nordenberg_13 Start: 12847, Stop: 13293, Start Num: 16

Candidate Starts for Nordenberg_13:

(Start: 10 @12826 has 2 MA's), (Start: 14 @12838 has 1 MA's), (Start: 16 @12847 has 13 MA's), (Start: 21 @12877 has 1 MA's), (23, 12886), (43, 13057), (47, 13090), (52, 13132), (58, 13153), (61, 13198), (64, 13234),

Gene: Numberten_10 Start: 8943, Stop: 9377, Start Num: 15

Candidate Starts for Numberten_10:

(Start: 15 @8943 has 139 MA's), (22, 8982), (27, 9006), (36, 9087), (46, 9177), (58, 9240),

Gene: OSmaximus_10 Start: 8941, Stop: 9375, Start Num: 15

Candidate Starts for OSmaximus_10:

(Start: 15 @8941 has 139 MA's), (22, 8980), (27, 9004), (36, 9085), (46, 9175), (58, 9238),

Gene: Olive_10 Start: 8940, Stop: 9374, Start Num: 15

Candidate Starts for Olive_10:

(Start: 15 @8940 has 139 MA's), (22, 8979), (27, 9003), (36, 9084), (46, 9174), (58, 9237),

Gene: OliverWalter_10 Start: 8939, Stop: 9373, Start Num: 15

Candidate Starts for OliverWalter_10:

(Start: 15 @8939 has 139 MA's), (22, 8978), (27, 9002), (36, 9083), (46, 9173), (58, 9236),

Gene: Omniscient_10 Start: 8943, Stop: 9377, Start Num: 15

Candidate Starts for Omniscient_10:

(Start: 15 @8943 has 139 MA's), (22, 8982), (27, 9006), (36, 9087), (46, 9177), (58, 9240),

Gene: Oosterbaan_10 Start: 8944, Stop: 9378, Start Num: 15

Candidate Starts for Oosterbaan_10:

(Start: 15 @8944 has 139 MA's), (22, 8983), (27, 9007), (36, 9088), (46, 9178), (58, 9241),

Gene: Orion_10 Start: 8941, Stop: 9375, Start Num: 15

Candidate Starts for Orion_10:

(Start: 15 @8941 has 139 MA's), (22, 8980), (27, 9004), (36, 9085), (46, 9175), (58, 9238),

Gene: PG1_10 Start: 8941, Stop: 9375, Start Num: 15

Candidate Starts for PG1_10:

(Start: 15 @8941 has 139 MA's), (22, 8980), (27, 9004), (36, 9085), (46, 9175), (58, 9238),

Gene: Paries_19 Start: 14215, Stop: 14661, Start Num: 16

Candidate Starts for Paries_19:

(Start: 10 @14194 has 2 MA's), (Start: 14 @14206 has 1 MA's), (Start: 16 @14215 has 13 MA's),
(Start: 21 @14245 has 1 MA's), (23, 14254), (43, 14425), (47, 14458), (52, 14500), (58, 14521), (61,
14566), (64, 14602),

Gene: Phamished_10 Start: 8940, Stop: 9374, Start Num: 15

Candidate Starts for Phamished_10:

(Start: 15 @8940 has 139 MA's), (22, 8979), (27, 9003), (36, 9084), (46, 9174), (58, 9237),

Gene: PhatCats2014_10 Start: 8944, Stop: 9378, Start Num: 15

Candidate Starts for PhatCats2014_10:

(Start: 15 @8944 has 139 MA's), (22, 8983), (27, 9007), (36, 9088), (46, 9178), (58, 9241),

Gene: PhatLouie_10 Start: 8943, Stop: 9377, Start Num: 15

Candidate Starts for PhatLouie_10:

(Start: 15 @8943 has 139 MA's), (22, 8982), (27, 9006), (36, 9087), (46, 9177), (58, 9240),

Gene: Pherdinand_10 Start: 8941, Stop: 9375, Start Num: 15

Candidate Starts for Pherdinand_10:

(Start: 15 @8941 has 139 MA's), (22, 8980), (27, 9004), (36, 9085), (46, 9175), (58, 9238),

Gene: Phipps_10 Start: 8943, Stop: 9377, Start Num: 15

Candidate Starts for Phipps_10:

(Start: 15 @8943 has 139 MA's), (22, 8982), (27, 9006), (36, 9087), (46, 9177), (58, 9240),

Gene: Phistory_56 Start: 36066, Stop: 36515, Start Num: 18

Candidate Starts for Phistory_56:

(7, 35985), (Start: 18 @36066 has 25 MA's), (29, 36138), (40, 36234), (43, 36270), (62, 36399), (63,
36405), (68, 36504),

Gene: Phox_138 Start: 83560, Stop: 83976, Start Num: 18

Candidate Starts for Phox_138:

(1, 83083), (Start: 18 @83560 has 25 MA's), (28, 83617), (35, 83680), (42, 83749), (48, 83794), (56,
83833),

Gene: PhrodoBaggins_105 Start: 8943, Stop: 9377, Start Num: 15

Candidate Starts for PhrodoBaggins_105:

(Start: 15 @8943 has 139 MA's), (22, 8982), (27, 9006), (36, 9087), (46, 9177), (58, 9240),

Gene: Phunky_10 Start: 8943, Stop: 9377, Start Num: 15

Candidate Starts for Phunky_10:

(Start: 15 @8943 has 139 MA's), (22, 8982), (27, 9006), (36, 9087), (46, 9177), (58, 9240),

Gene: Pio_145 Start: 85169, Stop: 85585, Start Num: 18

Candidate Starts for Pio_145:

(1, 84692), (Start: 18 @85169 has 25 MA's), (28, 85226), (35, 85289), (42, 85358), (48, 85403), (56, 85442),

Gene: Pipsqueak_10 Start: 8943, Stop: 9377, Start Num: 15

Candidate Starts for Pipsqueak_10:

(Start: 15 @8943 has 139 MA's), (22, 8982), (27, 9006), (36, 9087), (46, 9177), (58, 9240),

Gene: Plmatters_10 Start: 8943, Stop: 9377, Start Num: 15

Candidate Starts for Plmatters_10:

(Start: 15 @8943 has 139 MA's), (22, 8982), (27, 9006), (36, 9087), (46, 9177), (58, 9240),

Gene: Podrick_10 Start: 8943, Stop: 9377, Start Num: 15

Candidate Starts for Podrick_10:

(Start: 15 @8943 has 139 MA's), (22, 8982), (27, 9006), (36, 9087), (46, 9177), (58, 9240),

Gene: Pollux_66 Start: 44701, Stop: 45162, Start Num: 9

Candidate Starts for Pollux_66:

(2, 44551), (3, 44554), (4, 44629), (5, 44632), (Start: 9 @44701 has 6 MA's), (Start: 11 @44707 has 1 MA's), (28, 44788), (38, 44884), (52, 45001),

Gene: Pops_10 Start: 8943, Stop: 9377, Start Num: 15

Candidate Starts for Pops_10:

(Start: 15 @8943 has 139 MA's), (22, 8982), (27, 9006), (36, 9087), (46, 9177), (58, 9240),

Gene: Prickles_10 Start: 8949, Stop: 9383, Start Num: 15

Candidate Starts for Prickles_10:

(Start: 15 @8949 has 139 MA's), (22, 8988), (27, 9012), (36, 9093), (46, 9183), (58, 9246),

Gene: ProfessorX_10 Start: 8941, Stop: 9375, Start Num: 15

Candidate Starts for ProfessorX_10:

(Start: 15 @8941 has 139 MA's), (22, 8980), (27, 9004), (36, 9085), (46, 9175), (58, 9238),

Gene: Puhltonio_10 Start: 8943, Stop: 9377, Start Num: 15

Candidate Starts for Puhltonio_10:

(Start: 15 @8943 has 139 MA's), (22, 8982), (27, 9006), (36, 9087), (46, 9177), (58, 9240),

Gene: QueenBeane_10 Start: 8940, Stop: 9374, Start Num: 15

Candidate Starts for QueenBeane_10:

(Start: 15 @8940 has 139 MA's), (22, 8979), (27, 9003), (36, 9084), (46, 9174), (58, 9237),

Gene: Quisquilliae_10 Start: 8943, Stop: 9377, Start Num: 15

Candidate Starts for Quisquilliae_10:

(Start: 15 @8943 has 139 MA's), (22, 8982), (27, 9006), (36, 9087), (46, 9177), (58, 9240),

Gene: Rabinovich_140 Start: 83892, Stop: 84308, Start Num: 18

Candidate Starts for Rabinovich_140:

(1, 83415), (Start: 18 @83892 has 25 MA's), (28, 83949), (35, 84012), (42, 84081), (48, 84126), (56, 84165),

Gene: Riggan_10 Start: 8947, Stop: 9381, Start Num: 15

Candidate Starts for Riggan_10:

(Start: 15 @8947 has 139 MA's), (22, 8986), (27, 9010), (36, 9091), (46, 9181), (58, 9244),

Gene: Rofo_18 Start: 14497, Stop: 14928, Start Num: 21

Candidate Starts for Rofo_18:

(Start: 10 @14446 has 2 MA's), (Start: 14 @14458 has 1 MA's), (Start: 16 @14467 has 13 MA's), (Start: 21 @14497 has 1 MA's), (23, 14506), (43, 14677), (47, 14710), (52, 14752), (58, 14773), (61, 14818), (64, 14854),

Gene: Roliet_10 Start: 8943, Stop: 9377, Start Num: 15

Candidate Starts for Roliet_10:

(Start: 15 @8943 has 139 MA's), (22, 8982), (27, 9006), (36, 9087), (46, 9177), (58, 9240),

Gene: Roscoe_11 Start: 9178, Stop: 9612, Start Num: 15

Candidate Starts for Roscoe_11:

(Start: 15 @9178 has 139 MA's), (22, 9217), (27, 9241), (36, 9322), (46, 9412), (58, 9475),

Gene: SDcharge11_10 Start: 8936, Stop: 9370, Start Num: 15

Candidate Starts for SDcharge11_10:

(Start: 15 @8936 has 139 MA's), (22, 8975), (27, 8999), (36, 9080), (46, 9170), (58, 9233),

Gene: Samaymay_10 Start: 8940, Stop: 9374, Start Num: 15

Candidate Starts for Samaymay_10:

(Start: 15 @8940 has 139 MA's), (22, 8979), (27, 9003), (36, 9084), (46, 9174), (58, 9237),

Gene: Scoot17C_10 Start: 8944, Stop: 9378, Start Num: 15

Candidate Starts for Scoot17C_10:

(Start: 15 @8944 has 139 MA's), (22, 8983), (27, 9007), (36, 9088), (46, 9178), (58, 9241),

Gene: Serendipity_10 Start: 8943, Stop: 9377, Start Num: 15

Candidate Starts for Serendipity_10:

(Start: 15 @8943 has 139 MA's), (22, 8982), (27, 9006), (36, 9087), (46, 9177), (58, 9240),

Gene: Serpentine_0010 Start: 8943, Stop: 9377, Start Num: 15

Candidate Starts for Serpentine_0010:

(Start: 15 @8943 has 139 MA's), (22, 8982), (27, 9006), (36, 9087), (46, 9177), (58, 9240),

Gene: Shaqnato_134 Start: 81274, Stop: 81690, Start Num: 18

Candidate Starts for Shaqnato_134:

(1, 80797), (Start: 18 @81274 has 25 MA's), (28, 81331), (35, 81394), (42, 81463), (48, 81508), (56, 81547),

Gene: Sheila_10 Start: 8941, Stop: 9375, Start Num: 15

Candidate Starts for Sheila_10:

(Start: 15 @8941 has 139 MA's), (22, 8980), (27, 9004), (36, 9085), (46, 9175), (58, 9238),

Gene: Shelob_143 Start: 84076, Stop: 84492, Start Num: 18
Candidate Starts for Shelob_143:
(1, 83599), (Start: 18 @84076 has 25 MA's), (28, 84133), (35, 84196), (42, 84265), (48, 84310), (56, 84349),

Gene: ShiVal_10 Start: 8943, Stop: 9377, Start Num: 15
Candidate Starts for ShiVal_10:
(Start: 15 @8943 has 139 MA's), (22, 8982), (27, 9006), (36, 9087), (46, 9177), (58, 9240),

Gene: Shifa_130 Start: 81500, Stop: 81916, Start Num: 18
Candidate Starts for Shifa_130:
(1, 81023), (Start: 18 @81500 has 25 MA's), (28, 81557), (35, 81620), (42, 81689), (48, 81734), (56, 81773),

Gene: Sigman_10 Start: 8940, Stop: 9374, Start Num: 15
Candidate Starts for Sigman_10:
(Start: 15 @8940 has 139 MA's), (22, 8979), (27, 9003), (36, 9084), (46, 9174), (58, 9237),

Gene: Sitar_20 Start: 15655, Stop: 16110, Start Num: 14
Candidate Starts for Sitar_20:
(Start: 10 @15643 has 2 MA's), (Start: 14 @15655 has 1 MA's), (Start: 16 @15664 has 13 MA's),
(Start: 21 @15694 has 1 MA's), (23, 15703), (43, 15874), (47, 15907), (52, 15949), (58, 15970), (61, 16015), (64, 16051),

Gene: Skippy_10 Start: 8943, Stop: 9377, Start Num: 15
Candidate Starts for Skippy_10:
(Start: 15 @8943 has 139 MA's), (22, 8982), (27, 9006), (36, 9087), (46, 9177), (58, 9240),

Gene: Slatt_10 Start: 8945, Stop: 9379, Start Num: 15
Candidate Starts for Slatt_10:
(Start: 15 @8945 has 139 MA's), (22, 8984), (27, 9008), (36, 9089), (46, 9179), (58, 9242),

Gene: Soto_10 Start: 8940, Stop: 9374, Start Num: 15
Candidate Starts for Soto_10:
(Start: 15 @8940 has 139 MA's), (22, 8979), (27, 9003), (36, 9084), (46, 9174), (58, 9237),

Gene: Spartan300_10 Start: 8940, Stop: 9374, Start Num: 15
Candidate Starts for Spartan300_10:
(Start: 15 @8940 has 139 MA's), (22, 8979), (27, 9003), (36, 9084), (46, 9174), (58, 9237),

Gene: Suffolk_10 Start: 8942, Stop: 9376, Start Num: 15
Candidate Starts for Suffolk_10:
(Start: 15 @8942 has 139 MA's), (22, 8981), (27, 9005), (36, 9086), (46, 9176), (58, 9239),

Gene: Surely_10 Start: 8943, Stop: 9377, Start Num: 15
Candidate Starts for Surely_10:
(Start: 15 @8943 has 139 MA's), (22, 8982), (27, 9006), (36, 9087), (46, 9177), (58, 9240),

Gene: Swish_10 Start: 8944, Stop: 9378, Start Num: 15
Candidate Starts for Swish_10:
(Start: 15 @8944 has 139 MA's), (22, 8983), (27, 9007), (36, 9088), (46, 9178), (58, 9241),

Gene: Tangent_16 Start: 13468, Stop: 13914, Start Num: 16

Candidate Starts for Tangent_16:

(Start: 10 @13447 has 2 MA's), (Start: 14 @13459 has 1 MA's), (Start: 16 @13468 has 13 MA's), (Start: 21 @13498 has 1 MA's), (23, 13507), (43, 13678), (47, 13711), (52, 13753), (58, 13774), (61, 13819), (64, 13855),

Gene: Teardrop_140 Start: 81782, Stop: 82198, Start Num: 18

Candidate Starts for Teardrop_140:

(1, 81305), (Start: 18 @81782 has 25 MA's), (28, 81839), (35, 81902), (42, 81971), (48, 82016), (56, 82055),

Gene: Thora_10 Start: 8940, Stop: 9374, Start Num: 15

Candidate Starts for Thora_10:

(Start: 15 @8940 has 139 MA's), (22, 8979), (27, 9003), (36, 9084), (46, 9174), (58, 9237),

Gene: ThreeOh3D2_10 Start: 8941, Stop: 9375, Start Num: 15

Candidate Starts for ThreeOh3D2_10:

(Start: 15 @8941 has 139 MA's), (22, 8980), (27, 9004), (36, 9085), (46, 9175), (58, 9238),

Gene: TomBombadil_10 Start: 8943, Stop: 9377, Start Num: 15

Candidate Starts for TomBombadil_10:

(Start: 15 @8943 has 139 MA's), (22, 8982), (27, 9006), (36, 9087), (46, 9177), (58, 9240),

Gene: Tomlarah_10 Start: 8943, Stop: 9377, Start Num: 15

Candidate Starts for Tomlarah_10:

(Start: 15 @8943 has 139 MA's), (22, 8982), (27, 9006), (36, 9087), (46, 9177), (58, 9240),

Gene: Tooj_10 Start: 8941, Stop: 9375, Start Num: 15

Candidate Starts for Tooj_10:

(Start: 15 @8941 has 139 MA's), (22, 8980), (27, 9004), (36, 9085), (46, 9175), (58, 9238),

Gene: Trypo_10 Start: 8940, Stop: 9374, Start Num: 15

Candidate Starts for Trypo_10:

(Start: 15 @8940 has 139 MA's), (22, 8979), (27, 9003), (36, 9084), (46, 9174), (58, 9237),

Gene: UAch1_10 Start: 8943, Stop: 9377, Start Num: 15

Candidate Starts for UAch1_10:

(Start: 15 @8943 has 139 MA's), (22, 8982), (27, 9006), (36, 9087), (46, 9177), (58, 9240),

Gene: Usavi_10 Start: 8940, Stop: 9374, Start Num: 15

Candidate Starts for Usavi_10:

(Start: 15 @8940 has 139 MA's), (22, 8979), (27, 9003), (36, 9084), (46, 9174), (58, 9237),

Gene: Valjean_10 Start: 8943, Stop: 9377, Start Num: 15

Candidate Starts for Valjean_10:

(Start: 15 @8943 has 139 MA's), (22, 8982), (27, 9006), (36, 9087), (46, 9177), (58, 9240),

Gene: Vibaki_76 Start: 46752, Stop: 47243, Start Num: 17

Candidate Starts for Vibaki_76:

(Start: 17 @46752 has 1 MA's), (49, 47013),

Gene: Virapocalypse_10 Start: 8941, Stop: 9375, Start Num: 15

Candidate Starts for Virapocalypse_10:

(Start: 15 @8941 has 139 MA's), (22, 8980), (27, 9004), (36, 9085), (46, 9175), (58, 9238),

Gene: Vista_10 Start: 8943, Stop: 9377, Start Num: 15

Candidate Starts for Vista_10:

(Start: 15 @8943 has 139 MA's), (22, 8982), (27, 9006), (36, 9087), (46, 9177), (58, 9240),

Gene: Vivaldi_10 Start: 8941, Stop: 9375, Start Num: 15

Candidate Starts for Vivaldi_10:

(Start: 15 @8941 has 139 MA's), (22, 8980), (27, 9004), (36, 9085), (46, 9175), (58, 9238),

Gene: Vivi2_18 Start: 14618, Stop: 15085, Start Num: 10

Candidate Starts for Vivi2_18:

(Start: 10 @14618 has 2 MA's), (Start: 14 @14630 has 1 MA's), (Start: 16 @14639 has 13 MA's),
(Start: 21 @14669 has 1 MA's), (23, 14678), (43, 14849), (47, 14882), (52, 14924), (58, 14945), (61,
14990), (64, 15026),

Gene: Waterdiva_10 Start: 8944, Stop: 9378, Start Num: 15

Candidate Starts for Waterdiva_10:

(Start: 15 @8944 has 139 MA's), (22, 8983), (27, 9007), (36, 9088), (46, 9178), (58, 9241),

Gene: Weher20_10 Start: 8940, Stop: 9374, Start Num: 15

Candidate Starts for Weher20_10:

(Start: 15 @8940 has 139 MA's), (22, 8979), (27, 9003), (36, 9084), (46, 9174), (58, 9237),

Gene: WhereRU_161 Start: 91595, Stop: 92011, Start Num: 20

Candidate Starts for WhereRU_161:

(19, 91589), (Start: 20 @91595 has 1 MA's), (25, 91625), (34, 91694), (43, 91781), (51, 91847),

Gene: YorkOnyx_19 Start: 14161, Stop: 14622, Start Num: 16

Candidate Starts for YorkOnyx_19:

(Start: 10 @14140 has 2 MA's), (Start: 14 @14152 has 1 MA's), (Start: 16 @14161 has 13 MA's),
(Start: 21 @14191 has 1 MA's), (30, 14242), (43, 14371), (52, 14446), (58, 14467), (61, 14512),

Gene: Yoshand_10 Start: 8941, Stop: 9375, Start Num: 15

Candidate Starts for Yoshand_10:

(Start: 15 @8941 has 139 MA's), (22, 8980), (27, 9004), (36, 9085), (46, 9175), (58, 9238),

Gene: YouGoGlencoco_10 Start: 8940, Stop: 9374, Start Num: 15

Candidate Starts for YouGoGlencoco_10:

(Start: 15 @8940 has 139 MA's), (22, 8979), (27, 9003), (36, 9084), (46, 9174), (58, 9237),

Gene: Zaider_11 Start: 9173, Stop: 9607, Start Num: 15

Candidate Starts for Zaider_11:

(Start: 15 @9173 has 139 MA's), (22, 9212), (27, 9236), (36, 9317), (46, 9407), (58, 9470),

Gene: Zelda_10 Start: 8943, Stop: 9377, Start Num: 15

Candidate Starts for Zelda_10:

(Start: 15 @8943 has 139 MA's), (22, 8982), (27, 9006), (36, 9087), (46, 9177), (58, 9240),

Gene: Zonia_10 Start: 8957, Stop: 9391, Start Num: 15

Candidate Starts for Zonia_10:

(Start: 15 @8957 has 139 MA's), (22, 8996), (27, 9020), (36, 9101), (46, 9191), (58, 9254),