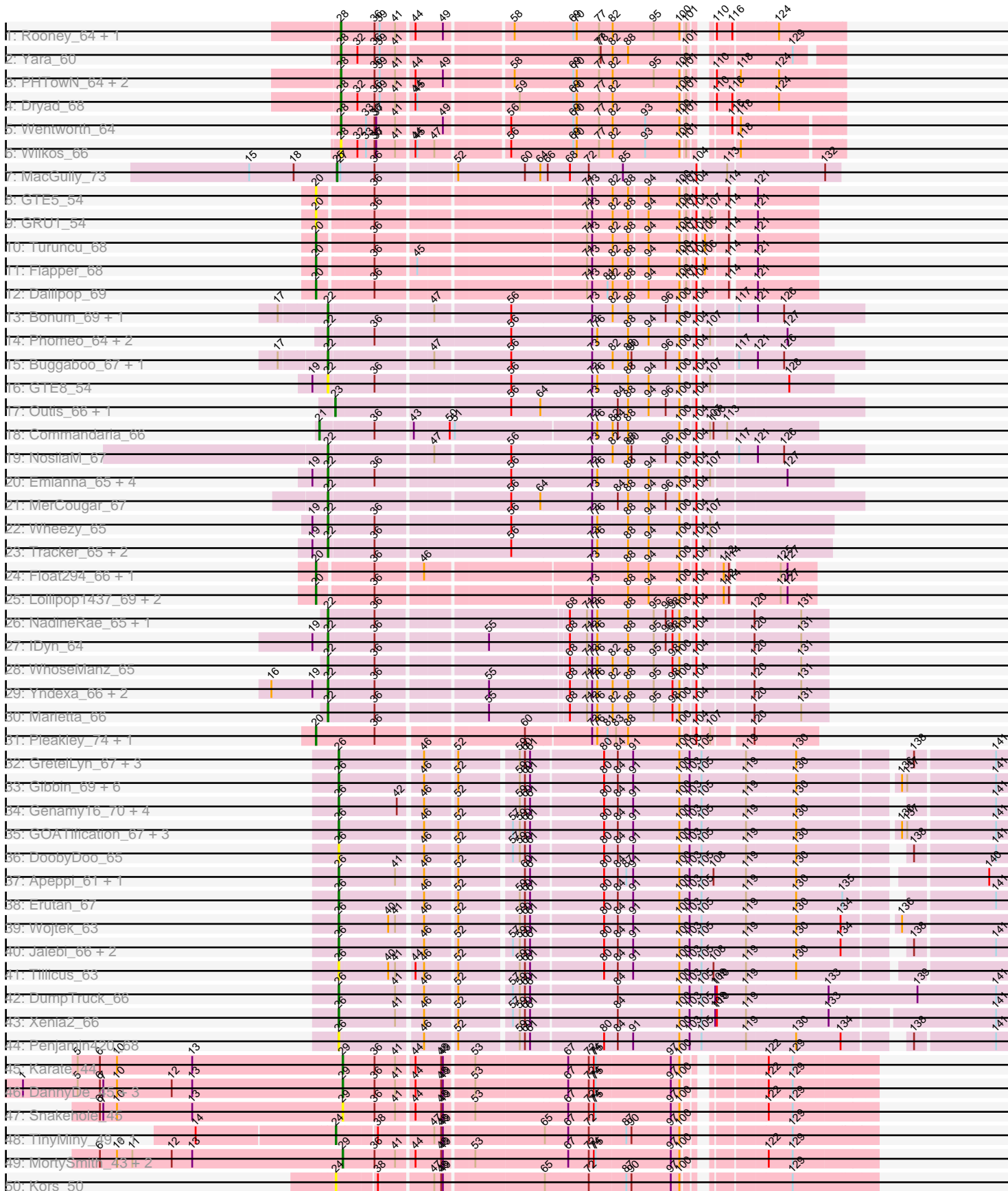
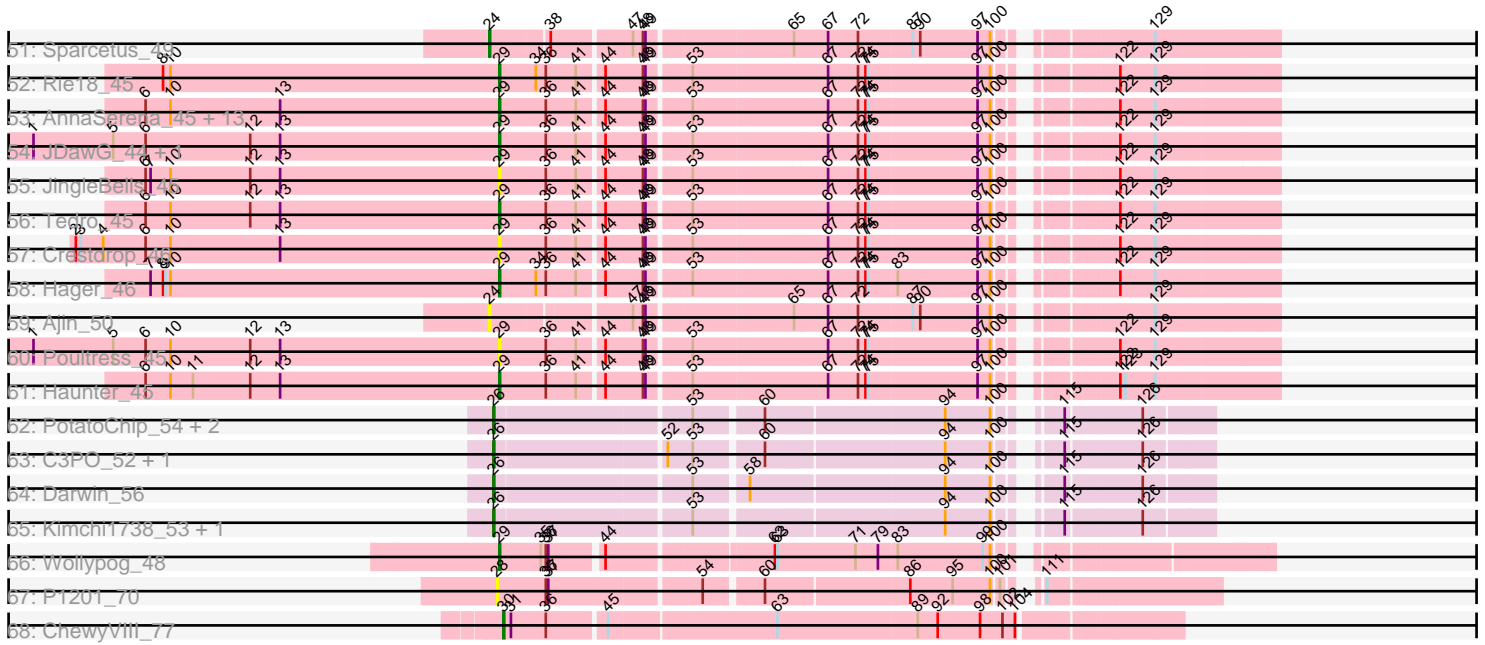


Pham 163432



Pham 163432



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 163432 Report

This analysis was run 04/28/24 on database version 559.

Pham number 163432 has 132 members, 24 are drafts.

Phages represented in each track:

- Track 1 : Rooney_64, Gibson_64
- Track 2 : Yara_60
- Track 3 : PHTowN_64, Lizz_64, ShakeNBake_64
- Track 4 : Dryad_68
- Track 5 : Wentworth_64
- Track 6 : Wilkos_66
- Track 7 : MacGully_73
- Track 8 : GTE5_54
- Track 9 : GRU1_54
- Track 10 : Turuncu_68
- Track 11 : Flapper_68
- Track 12 : Dalilpop_69
- Track 13 : Bonum_69, Kabluna_68
- Track 14 : Phomeo_64, Jifall16_64, KidneyBean_65
- Track 15 : Buggaboo_67, SuperSulley_67
- Track 16 : GTE8_54
- Track 17 : Outis_66, StarStruck_66
- Track 18 : Commandaria_66
- Track 19 : NosilaM_67
- Track 20 : Emianna_65, Kurt_65, NovumRegina_65, NatB6_65, GrootJr_67
- Track 21 : MerCougar_67
- Track 22 : Wheezy_65
- Track 23 : Tracker_65, Arti_64, Foxboro_66
- Track 24 : Float294_66, Skysand_67
- Track 25 : Lollipop1437_69, Ennea_72, Patio_67
- Track 26 : NadineRae_65, HubbaBubba_60
- Track 27 : IDyn_64
- Track 28 : WhoseManz_65
- Track 29 : Yndexa_66, Sukkupi_66, BiPauneto_68
- Track 30 : Marietta_66
- Track 31 : Pleakley_74, Fury_74
- Track 32 : GretelLyn_67, Zany_65, Sadboi_68, Yikes_69
- Track 33 : Gibbin_69, Patos_71, Ranch_67, NorManre_71, Lambo_65, ParvusTarda_66, Lila22_71
- Track 34 : Genamy16_70, NovaSharks_69, Avian_66, Alyssamiracle_70, Rumi_68
- Track 35 : GOATification_67, BirthdayBoy_69, Fulcrum_67, OtterstedtS21_67
- Track 36 : DoobyDoo_65

- Track 37 : Apeppi_61, LuckyLeo_64
- Track 38 : Erutan_67
- Track 39 : Wojtek_63
- Track 40 : Jalebi_66, MoiGyank_73, Sampudon_67
- Track 41 : Tillicus_63
- Track 42 : DumpTruck_66
- Track 43 : Xenia2_66
- Track 44 : Benjamin420_68
- Track 45 : Karate_44
- Track 46 : DannyDe_45, Chivey_45, Hiddenleaf_45, FreddieHg_45
- Track 47 : Snakehole_45
- Track 48 : TinyMiny_49, RikSengupta_49
- Track 49 : MortySmith_43, Erudite_44, Dauntless_45
- Track 50 : Kors_50
- Track 51 : Sparcetus_49
- Track 52 : Rie18_45
- Track 53 : AnnaSerena_45, Pharpay_45, NarutoRun_45, CoolCookie_50, Cybele_45, Gilda_45, Anakin_45, Rachella_45, Krampus_45, OverHedge_46, Kate_46, Neptune_45, Potty_45, PhunaPhoke_45
- Track 54 : JDawG_44, Aesir_44
- Track 55 : JingleBells_45
- Track 56 : Tedro_45
- Track 57 : Crestdrop_46
- Track 58 : Hager_46
- Track 59 : Ajin_50
- Track 60 : Poultruss_45
- Track 61 : Haunter_45
- Track 62 : PotatoChip_54, Zion_54, PeteyPab_53
- Track 63 : C3PO_52, Cruella_52
- Track 64 : Darwin_56
- Track 65 : Kimchi1738_53, Stickynote_54
- Track 66 : Wollypog_48
- Track 67 : P1201_70
- Track 68 : ChewyVIII_77

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

The start number called the most often in the published annotations is 26, it was called in 33 of the 108 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Alyssamiracle_70, Apeppi_61, Avian_66, BirthdayBoy_69, C3PO_52, Cruella_52, Darwin_56, DoobyDoo_65, DumpTruck_66, Erutan_67, Fulcrum_67, GOATification_67, Genamy16_70, Gibbin_69, GretellLyn_67, Jalebi_66, Kimchi1738_53, Lambo_65, Lila22_71, LuckyLeo_64, MoiGyank_73, NorManre_71, NovaSharks_69, OtterstedtS21_67, ParvusTarda_66, Patos_71, Benjamin420_68, PeteyPab_53, PotatoChip_54, Ranch_67, Rumi_68, Sadboi_68, Sampudon_67, Stickynote_54, Tillicus_63, Wojtek_63, Xenia2_66, Yikes_69, Zany_65, Zion_54,

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

•

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

• Aesir_44, Ajin_50, Anakin_45, AnnaSerena_45, Arti_64, BiPauneto_68, Bonum_69, Buggaboo_67, ChewyVIII_77, Chivey_45, Commandaria_66, CoolCookie_50, Crestdrop_46, Cybele_45, Dalilpop_69, DannyDe_45, Dauntless_45, Dryad_68, Emianna_65, Ennea_72, Erudite_44, Flapper_68, Float294_66, Foxboro_66, FreddieHg_45, Fury_74, GRU1_54, GTE5_54, GTE8_54, Gibson_64, Gilda_45, GrootJr_67, Hager_46, Haunter_45, Hiddenleaf_45, HubbaBubba_60, IDyn_64, JDawG_44, Jifall16_64, JingleBells_45, Kabluna_68, Karate_44, Kate_46, KidneyBean_65, Kors_50, Krampus_45, Kurt_65, Lizz_64, Lollipop1437_69, MacGully_73, Marietta_66, MerCougar_67, MortySmith_43, NadineRae_65, NarutoRun_45, NatB6_65, Neptune_45, NosilaM_67, NovumRegina_65, Outis_66, OverHedge_46, P1201_70, PHTowN_64, Patio_67, Pharpay_45, Phomeo_64, PhunaPhoke_45, Pleakley_74, Potty_45, Poultruss_45, Rachella_45, Rie18_45, RikSengupta_49, Rooney_64, ShakeNBake_64, Skysand_67, Snakehole_45, Sparcetus_49, StarStruck_66, Sukkupi_66, SuperSulley_67, Tedro_45, TinyMiny_49, Tracker_65, Turuncu_68, Wentworth_64, Wheezy_65, WhoseManz_65, Wilkos_66, Wollypog_48, Yara_60, Yndexa_66,

Summary by start number:

Start 20:

- Found in 12 of 132 (9.1%) of genes in pham
- Manual Annotations of this start: 10 of 108
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Dalilpop_69 (CR1), Ennea_72 (CR3), Flapper_68 (CR1), Float294_66 (CR3), Fury_74 (CR5), GRU1_54 (CR1), GTE5_54 (CR1), Lollipop1437_69 (CR3), Patio_67 (CR3), Pleakley_74 (CR5), Skysand_67 (CR3), Turuncu_68 (CR1),

Start 21:

- Found in 1 of 132 (0.8%) of genes in pham
- Manual Annotations of this start: 1 of 108
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Commandaria_66 (CR2),

Start 22:

- Found in 27 of 132 (20.5%) of genes in pham
- Manual Annotations of this start: 24 of 108
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Arti_64 (CR2), BiPauneto_68 (CR4), Bonum_69 (CR2), Buggaboo_67 (CR2), Emianna_65 (CR2), Foxboro_66 (CR2), GTE8_54 (CR2), GrootJr_67 (CR2), HubbaBubba_60 (CR4), IDyn_64 (CR4), Jifall16_64 (CR2), Kabluna_68 (CR2), KidneyBean_65 (CR2), Kurt_65 (CR2), Marietta_66 (CR4), MerCougar_67 (CR2), NadineRae_65 (CR4), NatB6_65 (CR2), NosilaM_67 (CR2), NovumRegina_65 (CR2), Phomeo_64 (CR2), Sukkupi_66 (CR4), SuperSulley_67 (CR2), Tracker_65 (CR2), Wheezy_65 (CR2), WhoseManz_65 (CR4), Yndexa_66 (CR4),

Start 23:

- Found in 2 of 132 (1.5%) of genes in pham
- Manual Annotations of this start: 2 of 108

- Called 100.0% of time when present
- Phage (with cluster) where this start called: Outis_66 (CR2), StarStruck_66 (CR2),

Start 24:

- Found in 5 of 132 (3.8%) of genes in pham
- Manual Annotations of this start: 3 of 108
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ajin_50 (EF), Kors_50 (EF), RikSengupta_49 (EF), Sparcetus_49 (EF), TinyMiny_49 (EF),

Start 25:

- Found in 1 of 132 (0.8%) of genes in pham
- Manual Annotations of this start: 1 of 108
- Called 100.0% of time when present
- Phage (with cluster) where this start called: MacGully_73 (CR),

Start 26:

- Found in 40 of 132 (30.3%) of genes in pham
- Manual Annotations of this start: 33 of 108
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Alyssamiracle_70 (DV), Apeppi_61 (DV), Avian_66 (DV), BirthdayBoy_69 (DV), C3PO_52 (EN), Cruella_52 (EN), Darwin_56 (EN), DoobyDoo_65 (DV), DumpTruck_66 (DV), Erutan_67 (DV), Fulcrum_67 (DV), GOATification_67 (DV), Genamy16_70 (DV), Gibbin_69 (DV), GretelLyn_67 (DV), Jalebi_66 (DV), Kimchi1738_53 (EN), Lambo_65 (DV), Lila22_71 (DV), LuckyLeo_64 (DV), MoiGyank_73 (DV), NorManre_71 (DV), NovaSharks_69 (DV), OtterstedtS21_67 (DV), ParvusTarda_66 (DV), Patos_71 (DV), Penjamin420_68 (DV), PeteyPab_53 (EN), PotatoChip_54 (EN), Ranch_67 (DV), Rumi_68 (DV), Sadboi_68 (DV), Sampudon_67 (DV), Stickynote_54 (EN), Tillicus_63 (DV), Wojtek_63 (DV), Xenia2_66 (DV), Yikes_69 (DV), Zany_65 (DV), Zion_54 (EN),

Start 28:

- Found in 10 of 132 (7.6%) of genes in pham
- Manual Annotations of this start: 8 of 108
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Dryad_68 (BN), Gibson_64 (BN), Lizz_64 (BN), P1201_70 (singleton), PHTowN_64 (BN), Rooney_64 (BN), ShakeNBake_64 (BN), Wentworth_64 (BN), Wilkos_66 (BN), Yara_60 (BN),

Start 29:

- Found in 33 of 132 (25.0%) of genes in pham
- Manual Annotations of this start: 25 of 108
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aesir_44 (EF), Anakin_45 (EF), AnnaSerena_45 (EF), Chivey_45 (EF), CoolCookie_50 (EF), Crestdrop_46 (EF), Cybele_45 (EF), DannyDe_45 (EF), Dauntless_45 (EF), Erudite_44 (EF), FreddieHg_45 (EF), Gilda_45 (EF), Hager_46 (EF), Haunter_45 (EF), Hiddenleaf_45 (EF), JDawG_44 (EF), JingleBells_45 (EF), Karate_44 (EF), Kate_46 (EF), Krampus_45 (EF), MortySmith_43 (EF), NarutoRun_45 (EF), Neptune_45 (EF), OverHedge_46 (EF), Pharpay_45 (EF), PhunaPhoke_45 (EF), Potty_45 (EF), Poultruss_45 (EF), Rachella_45 (EF), Rie18_45 (EF), Snakehole_45 (EF), Tedro_45 (EF), Wollypog_48 (singleton),

Start 30:

- Found in 1 of 132 (0.8%) of genes in pham
- Manual Annotations of this start: 1 of 108
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ChewyVIII_77 (singleton),

Summary by clusters:

There are 11 clusters represented in this pham: CR2, CR3, singleton, EN, CR4, CR5, BN, EF, CR1, DV, CR,

Info for manual annotations of cluster BN:

- Start number 28 was manually annotated 8 times for cluster BN.

Info for manual annotations of cluster CR:

- Start number 25 was manually annotated 1 time for cluster CR.

Info for manual annotations of cluster CR1:

- Start number 20 was manually annotated 3 times for cluster CR1.

Info for manual annotations of cluster CR2:

- Start number 21 was manually annotated 1 time for cluster CR2.
- Start number 22 was manually annotated 17 times for cluster CR2.
- Start number 23 was manually annotated 2 times for cluster CR2.

Info for manual annotations of cluster CR3:

- Start number 20 was manually annotated 5 times for cluster CR3.

Info for manual annotations of cluster CR4:

- Start number 22 was manually annotated 7 times for cluster CR4.

Info for manual annotations of cluster CR5:

- Start number 20 was manually annotated 2 times for cluster CR5.

Info for manual annotations of cluster DV:

- Start number 26 was manually annotated 25 times for cluster DV.

Info for manual annotations of cluster EF:

- Start number 24 was manually annotated 3 times for cluster EF.
- Start number 29 was manually annotated 24 times for cluster EF.

Info for manual annotations of cluster EN:

- Start number 26 was manually annotated 8 times for cluster EN.

Gene Information:

Gene: Aesir_44 Start: 29791, Stop: 30636, Start Num: 29

Candidate Starts for Aesir_44:

(1, 29230), (5, 29326), (6, 29365), (12, 29491), (13, 29527), (Start: 29 @29791 has 25 MA's), (36, 29845), (41, 29881), (44, 29908), (48, 29953), (49, 29956), (53, 30001), (67, 30157), (72, 30193), (74, 30202), (75, 30205), (97, 30334), (100, 30349), (122, 30454), (129, 30496),

Gene: Ajin_50 Start: 31113, Stop: 31955, Start Num: 24

Candidate Starts for Ajin_50:

(Start: 24 @31113 has 3 MA's), (47, 31260), (48, 31272), (49, 31275), (65, 31437), (67, 31473), (72, 31509), (87, 31572), (90, 31581), (97, 31650), (100, 31665), (129, 31812),

Gene: Alyssamiracle_70 Start: 44487, Stop: 45557, Start Num: 26

Candidate Starts for Alyssamiracle_70:

(Start: 26 @44487 has 33 MA's), (42, 44583), (46, 44619), (52, 44667), (59, 44760), (60, 44769), (61, 44778), (80, 44901), (84, 44922), (91, 44949), (100, 45030), (103, 45048), (105, 45069), (119, 45147), (130, 45231), (141, 45528),

Gene: Anakin_45 Start: 30144, Stop: 30992, Start Num: 29

Candidate Starts for Anakin_45:

(6, 29718), (10, 29748), (13, 29880), (Start: 29 @30144 has 25 MA's), (36, 30198), (41, 30234), (44, 30261), (48, 30306), (49, 30309), (53, 30354), (67, 30510), (72, 30546), (74, 30555), (75, 30558), (97, 30687), (100, 30702), (122, 30807), (129, 30849),

Gene: AnnaSerena_45 Start: 30179, Stop: 31027, Start Num: 29

Candidate Starts for AnnaSerena_45:

(6, 29753), (10, 29783), (13, 29915), (Start: 29 @30179 has 25 MA's), (36, 30233), (41, 30269), (44, 30296), (48, 30341), (49, 30344), (53, 30389), (67, 30545), (72, 30581), (74, 30590), (75, 30593), (97, 30722), (100, 30737), (122, 30842), (129, 30884),

Gene: Apeppi_61 Start: 44646, Stop: 45731, Start Num: 26

Candidate Starts for Apeppi_61:

(Start: 26 @44646 has 33 MA's), (41, 44739), (46, 44778), (52, 44826), (60, 44928), (61, 44937), (80, 45060), (84, 45081), (87, 45096), (91, 45108), (100, 45189), (103, 45207), (105, 45228), (108, 45249), (119, 45306), (130, 45390), (140, 45690),

Gene: Arti_64 Start: 50810, Stop: 49992, Start Num: 22

Candidate Starts for Arti_64:

(19, 50837), (Start: 22 @50810 has 24 MA's), (36, 50738), (56, 50516), (73, 50375), (76, 50366), (88, 50315), (94, 50279), (100, 50225), (104, 50207), (107, 50192),

Gene: Avian_66 Start: 44215, Stop: 45285, Start Num: 26

Candidate Starts for Avian_66:

(Start: 26 @44215 has 33 MA's), (42, 44311), (46, 44347), (52, 44395), (59, 44488), (60, 44497), (61, 44506), (80, 44629), (84, 44650), (91, 44677), (100, 44758), (103, 44776), (105, 44797), (119, 44875), (130, 44959), (141, 45256),

Gene: BiPauneto_68 Start: 50402, Stop: 49605, Start Num: 22

Candidate Starts for BiPauneto_68:

(16, 50501), (19, 50429), (Start: 22 @50402 has 24 MA's), (36, 50327), (55, 50153), (68, 50021), (71, 49991), (73, 49982), (76, 49973), (82, 49946), (88, 49919), (95, 49874), (98, 49841), (100, 49829), (104, 49811), (120, 49730), (131, 49652),

Gene: BirthdayBoy_69 Start: 45791, Stop: 46882, Start Num: 26

Candidate Starts for BirthdayBoy_69:

(Start: 26 @45791 has 33 MA's), (46, 45923), (52, 45971), (57, 46052), (59, 46064), (60, 46073), (61, 46082), (80, 46205), (84, 46226), (91, 46253), (100, 46334), (103, 46352), (105, 46373), (119, 46451), (130, 46535), (136, 46700), (137, 46709), (141, 46853),

Gene: Bonum_69 Start: 51702, Stop: 50839, Start Num: 22

Candidate Starts for Bonum_69:

(17, 51780), (Start: 22 @51702 has 24 MA's), (47, 51540), (56, 51414), (73, 51273), (82, 51240), (88, 51213), (96, 51147), (100, 51123), (104, 51105), (117, 51051), (121, 51021), (126, 50976),

Gene: Buggaboo_67 Start: 52253, Stop: 51390, Start Num: 22

Candidate Starts for Buggaboo_67:

(17, 52331), (Start: 22 @52253 has 24 MA's), (47, 52091), (56, 51965), (73, 51824), (82, 51791), (88, 51764), (90, 51758), (96, 51698), (100, 51674), (104, 51656), (117, 51602), (121, 51572), (126, 51527),

Gene: C3PO_52 Start: 45078, Stop: 44314, Start Num: 26

Candidate Starts for C3PO_52:

(Start: 26 @45078 has 33 MA's), (52, 44886), (53, 44859), (60, 44784), (94, 44577), (100, 44523), (115, 44478), (126, 44394),

Gene: ChewyVIII_77 Start: 56830, Stop: 56066, Start Num: 30

Candidate Starts for ChewyVIII_77:

(Start: 30 @56830 has 1 MA's), (31, 56821), (36, 56782), (45, 56716), (63, 56524), (89, 56359), (92, 56335), (98, 56287), (102, 56260), (104, 56245),

Gene: Chivey_45 Start: 29369, Stop: 30214, Start Num: 29

Candidate Starts for Chivey_45:

(1, 28808), (5, 28904), (6, 28943), (7, 28949), (10, 28973), (12, 29069), (13, 29105), (Start: 29 @29369 has 25 MA's), (36, 29423), (41, 29459), (44, 29486), (48, 29531), (49, 29534), (53, 29579), (67, 29735), (72, 29771), (74, 29780), (75, 29783), (97, 29912), (100, 29927), (122, 30032), (129, 30074),

Gene: Commandaria_66 Start: 52055, Stop: 51243, Start Num: 21

Candidate Starts for Commandaria_66:

(Start: 21 @52055 has 1 MA's), (36, 51968), (43, 51908), (50, 51851), (51, 51842), (73, 51608), (76, 51599), (82, 51575), (84, 51566), (88, 51548), (100, 51458), (104, 51440), (107, 51425), (108, 51419), (113, 51395),

Gene: CoolCookie_50 Start: 30174, Stop: 31022, Start Num: 29

Candidate Starts for CoolCookie_50:

(6, 29748), (10, 29778), (13, 29910), (Start: 29 @30174 has 25 MA's), (36, 30228), (41, 30264), (44, 30291), (48, 30336), (49, 30339), (53, 30384), (67, 30540), (72, 30576), (74, 30585), (75, 30588), (97, 30717), (100, 30732), (122, 30837), (129, 30879),

Gene: Crestdrop_46 Start: 29400, Stop: 30245, Start Num: 29

Candidate Starts for Crestdrop_46:

(2, 28890), (3, 28896), (4, 28923), (6, 28974), (10, 29004), (13, 29136), (Start: 29 @29400 has 25 MA's), (36, 29454), (41, 29490), (44, 29517), (48, 29562), (49, 29565), (53, 29610), (67, 29766), (72, 29802), (74, 29811), (75, 29814), (97, 29943), (100, 29958), (122, 30063), (129, 30105),

Gene: Cruella_52 Start: 45078, Stop: 44314, Start Num: 26

Candidate Starts for Cruella_52:

(Start: 26 @45078 has 33 MA's), (52, 44886), (53, 44859), (60, 44784), (94, 44577), (100, 44523), (115, 44478), (126, 44394),

Gene: Cybele_45 Start: 30144, Stop: 30992, Start Num: 29

Candidate Starts for Cybele_45:

(6, 29718), (10, 29748), (13, 29880), (Start: 29 @30144 has 25 MA's), (36, 30198), (41, 30234), (44, 30261), (48, 30306), (49, 30309), (53, 30354), (67, 30510), (72, 30546), (74, 30555), (75, 30558), (97, 30687), (100, 30702), (122, 30807), (129, 30849),

Gene: Dalilpop_69 Start: 52942, Stop: 52163, Start Num: 20

Candidate Starts for Dalilpop_69:

(Start: 20 @52942 has 10 MA's), (36, 52855), (71, 52516), (73, 52507), (81, 52480), (82, 52474), (88, 52447), (94, 52417), (100, 52363), (101, 52357), (104, 52345), (114, 52303), (121, 52267),

Gene: DannyDe_45 Start: 29375, Stop: 30220, Start Num: 29

Candidate Starts for DannyDe_45:

(1, 28814), (5, 28910), (6, 28949), (7, 28955), (10, 28979), (12, 29075), (13, 29111), (Start: 29 @29375 has 25 MA's), (36, 29429), (41, 29465), (44, 29492), (48, 29537), (49, 29540), (53, 29585), (67, 29741), (72, 29777), (74, 29786), (75, 29789), (97, 29918), (100, 29933), (122, 30038), (129, 30080),

Gene: Darwin_56 Start: 44559, Stop: 43795, Start Num: 26

Candidate Starts for Darwin_56:

(Start: 26 @44559 has 33 MA's), (53, 44340), (58, 44283), (94, 44058), (100, 44004), (115, 43959), (126, 43875),

Gene: Dauntless_45 Start: 29727, Stop: 30572, Start Num: 29

Candidate Starts for Dauntless_45:

(6, 29301), (10, 29331), (11, 29358), (12, 29427), (13, 29463), (Start: 29 @29727 has 25 MA's), (36, 29781), (41, 29817), (44, 29844), (48, 29889), (49, 29892), (53, 29937), (67, 30093), (72, 30129), (74, 30138), (75, 30141), (97, 30270), (100, 30285), (122, 30390), (129, 30432),

Gene: DoobyDoo_65 Start: 44375, Stop: 45445, Start Num: 26

Candidate Starts for DoobyDoo_65:

(Start: 26 @44375 has 33 MA's), (46, 44507), (52, 44555), (57, 44636), (59, 44648), (60, 44657), (61, 44666), (80, 44789), (84, 44810), (91, 44837), (100, 44918), (103, 44936), (105, 44957), (119, 45035), (130, 45119), (138, 45284), (141, 45416),

Gene: Dryad_68 Start: 46911, Stop: 46123, Start Num: 28

Candidate Starts for Dryad_68:

(Start: 28 @46911 has 8 MA's), (32, 46884), (36, 46857), (39, 46848), (41, 46821), (44, 46797), (45, 46794), (59, 46635), (69, 46545), (70, 46539), (77, 46500), (82, 46479), (100, 46362), (101, 46356), (110, 46338), (116, 46311), (124, 46239),

Gene: DumpTruck_66 Start: 44187, Stop: 45317, Start Num: 26

Candidate Starts for DumpTruck_66:

(Start: 26 @44187 has 33 MA's), (41, 44283), (46, 44322), (52, 44370), (57, 44451), (59, 44463), (60, 44472), (61, 44481), (84, 44625), (100, 44733), (103, 44751), (105, 44772), (109, 44796), (110, 44799), (119, 44850), (133, 44991), (139, 45147), (141, 45285),

Gene: Emianna_65 Start: 52042, Stop: 51221, Start Num: 22

Candidate Starts for Emianna_65:

(19, 52069), (Start: 22 @52042 has 24 MA's), (36, 51970), (56, 51748), (73, 51607), (76, 51598), (88, 51547), (94, 51511), (100, 51457), (104, 51439), (107, 51424), (127, 51301),

Gene: Ennea_72 Start: 53024, Stop: 52245, Start Num: 20

Candidate Starts for Ennea_72:

(Start: 20 @53024 has 10 MA's), (36, 52940), (73, 52592), (88, 52532), (94, 52496), (100, 52442), (104, 52424), (112, 52391), (114, 52382), (125, 52307), (127, 52295),

Gene: Erudite_44 Start: 29727, Stop: 30572, Start Num: 29

Candidate Starts for Erudite_44:

(6, 29301), (10, 29331), (11, 29358), (12, 29427), (13, 29463), (Start: 29 @29727 has 25 MA's), (36, 29781), (41, 29817), (44, 29844), (48, 29889), (49, 29892), (53, 29937), (67, 30093), (72, 30129), (74, 30138), (75, 30141), (97, 30270), (100, 30285), (122, 30390), (129, 30432),

Gene: Erutan_67 Start: 45017, Stop: 46087, Start Num: 26

Candidate Starts for Erutan_67:

(Start: 26 @45017 has 33 MA's), (46, 45149), (52, 45197), (59, 45290), (60, 45299), (61, 45308), (80, 45431), (84, 45452), (91, 45479), (100, 45560), (103, 45578), (105, 45599), (119, 45677), (130, 45761), (135, 45842), (141, 46058),

Gene: Flapper_68 Start: 52133, Stop: 51354, Start Num: 20

Candidate Starts for Flapper_68:

(Start: 20 @52133 has 10 MA's), (36, 52046), (45, 51983), (71, 51707), (73, 51698), (82, 51665), (88, 51638), (94, 51608), (100, 51554), (101, 51548), (104, 51536), (106, 51530), (114, 51494), (121, 51458),

Gene: Float294_66 Start: 52739, Stop: 51960, Start Num: 20

Candidate Starts for Float294_66:

(Start: 20 @52739 has 10 MA's), (36, 52655), (46, 52580), (73, 52307), (88, 52247), (94, 52211), (100, 52157), (104, 52139), (112, 52106), (114, 52097), (125, 52022), (127, 52010),

Gene: Foxboro_66 Start: 52567, Stop: 51746, Start Num: 22

Candidate Starts for Foxboro_66:

(19, 52594), (Start: 22 @52567 has 24 MA's), (36, 52495), (56, 52273), (73, 52132), (76, 52123), (88, 52072), (94, 52036), (100, 51982), (104, 51964), (107, 51949),

Gene: FreddieHg_45 Start: 29385, Stop: 30230, Start Num: 29

Candidate Starts for FreddieHg_45:

(1, 28824), (5, 28920), (6, 28959), (7, 28965), (10, 28989), (12, 29085), (13, 29121), (Start: 29 @29385 has 25 MA's), (36, 29439), (41, 29475), (44, 29502), (48, 29547), (49, 29550), (53, 29595), (67, 29751), (72, 29787), (74, 29796), (75, 29799), (97, 29928), (100, 29943), (122, 30048), (129, 30090),

Gene: Fulcrum_67 Start: 45099, Stop: 46190, Start Num: 26

Candidate Starts for Fulcrum_67:

(Start: 26 @45099 has 33 MA's), (46, 45231), (52, 45279), (57, 45360), (59, 45372), (60, 45381), (61, 45390), (80, 45513), (84, 45534), (91, 45561), (100, 45642), (103, 45660), (105, 45681), (119, 45759), (130, 45843), (136, 46008), (137, 46017), (141, 46161),

Gene: Fury_74 Start: 51253, Stop: 50462, Start Num: 20

Candidate Starts for Fury_74:

(Start: 20 @51253 has 10 MA's), (36, 51157), (60, 50923), (73, 50812), (76, 50803), (81, 50785), (83, 50773), (88, 50752), (100, 50662), (104, 50644), (107, 50629), (120, 50569),

Gene: GOATification_67 Start: 45099, Stop: 46190, Start Num: 26

Candidate Starts for GOATification_67:

(Start: 26 @45099 has 33 MA's), (46, 45231), (52, 45279), (57, 45360), (59, 45372), (60, 45381), (61, 45390), (80, 45513), (84, 45534), (91, 45561), (100, 45642), (103, 45660), (105, 45681), (119, 45759),

(130, 45843), (136, 46008), (137, 46017), (141, 46161),

Gene: GRU1_54 Start: 43981, Stop: 43202, Start Num: 20

Candidate Starts for GRU1_54:

(Start: 20 @43981 has 10 MA's), (36, 43894), (71, 43555), (73, 43546), (82, 43513), (88, 43486), (94, 43456), (100, 43402), (101, 43396), (104, 43384), (107, 43369), (114, 43342), (121, 43306),

Gene: GTE5_54 Start: 45013, Stop: 44234, Start Num: 20

Candidate Starts for GTE5_54:

(Start: 20 @45013 has 10 MA's), (36, 44926), (71, 44587), (73, 44578), (82, 44545), (88, 44518), (94, 44488), (100, 44434), (101, 44428), (104, 44416), (114, 44374), (121, 44338),

Gene: GTE8_54 Start: 45279, Stop: 44458, Start Num: 22

Candidate Starts for GTE8_54:

(19, 45306), (Start: 22 @45279 has 24 MA's), (36, 45207), (56, 44985), (73, 44844), (76, 44835), (88, 44784), (94, 44748), (100, 44694), (104, 44676), (107, 44661), (128, 44535),

Gene: Genamy16_70 Start: 44473, Stop: 45543, Start Num: 26

Candidate Starts for Genamy16_70:

(Start: 26 @44473 has 33 MA's), (42, 44569), (46, 44605), (52, 44653), (59, 44746), (60, 44755), (61, 44764), (80, 44887), (84, 44908), (91, 44935), (100, 45016), (103, 45034), (105, 45055), (119, 45133), (130, 45217), (141, 45514),

Gene: Gibbin_69 Start: 45904, Stop: 46995, Start Num: 26

Candidate Starts for Gibbin_69:

(Start: 26 @45904 has 33 MA's), (46, 46036), (52, 46084), (59, 46177), (60, 46186), (61, 46195), (80, 46318), (84, 46339), (91, 46366), (100, 46447), (103, 46465), (105, 46486), (119, 46564), (130, 46648), (136, 46813), (137, 46822), (141, 46966),

Gene: Gibson_64 Start: 46180, Stop: 45395, Start Num: 28

Candidate Starts for Gibson_64:

(Start: 28 @46180 has 8 MA's), (36, 46126), (39, 46117), (41, 46090), (44, 46066), (49, 46018), (58, 45913), (69, 45814), (70, 45808), (77, 45769), (82, 45748), (95, 45676), (100, 45631), (101, 45625), (110, 45607), (116, 45580), (124, 45508),

Gene: Gilda_45 Start: 30168, Stop: 31013, Start Num: 29

Candidate Starts for Gilda_45:

(6, 29742), (10, 29772), (13, 29904), (Start: 29 @30168 has 25 MA's), (36, 30222), (41, 30258), (44, 30285), (48, 30330), (49, 30333), (53, 30378), (67, 30534), (72, 30570), (74, 30579), (75, 30582), (97, 30711), (100, 30726), (122, 30831), (129, 30873),

Gene: Gretellyn_67 Start: 45889, Stop: 46959, Start Num: 26

Candidate Starts for Gretellyn_67:

(Start: 26 @45889 has 33 MA's), (46, 46021), (52, 46069), (59, 46162), (60, 46171), (61, 46180), (80, 46303), (84, 46324), (91, 46351), (100, 46432), (103, 46450), (105, 46471), (119, 46549), (130, 46633), (138, 46798), (141, 46930),

Gene: GrootJr_67 Start: 51436, Stop: 50615, Start Num: 22

Candidate Starts for GrootJr_67:

(19, 51463), (Start: 22 @51436 has 24 MA's), (36, 51364), (56, 51142), (73, 51001), (76, 50992), (88, 50941), (94, 50905), (100, 50851), (104, 50833), (107, 50818), (127, 50695),

Gene: Hager_46 Start: 29593, Stop: 30441, Start Num: 29

Candidate Starts for Hager_46:

(7, 29173), (8, 29188), (9, 29191), (10, 29197), (Start: 29 @29593 has 25 MA's), (34, 29635), (36, 29647), (41, 29683), (44, 29710), (48, 29755), (49, 29758), (53, 29803), (67, 29959), (72, 29995), (74, 30004), (75, 30007), (83, 30040), (97, 30136), (100, 30151), (122, 30256), (129, 30298),

Gene: Haunter_45 Start: 29551, Stop: 30396, Start Num: 29

Candidate Starts for Haunter_45:

(6, 29125), (10, 29155), (11, 29182), (12, 29251), (13, 29287), (Start: 29 @29551 has 25 MA's), (36, 29605), (41, 29641), (44, 29668), (48, 29713), (49, 29716), (53, 29761), (67, 29917), (72, 29953), (74, 29962), (75, 29965), (97, 30094), (100, 30109), (122, 30214), (123, 30220), (129, 30256),

Gene: Hiddenleaf_45 Start: 29369, Stop: 30214, Start Num: 29

Candidate Starts for Hiddenleaf_45:

(1, 28808), (5, 28904), (6, 28943), (7, 28949), (10, 28973), (12, 29069), (13, 29105), (Start: 29 @29369 has 25 MA's), (36, 29423), (41, 29459), (44, 29486), (48, 29531), (49, 29534), (53, 29579), (67, 29735), (72, 29771), (74, 29780), (75, 29783), (97, 29912), (100, 29927), (122, 30032), (129, 30074),

Gene: HubbaBubba_60 Start: 46888, Stop: 46091, Start Num: 22

Candidate Starts for HubbaBubba_60:

(Start: 22 @46888 has 24 MA's), (36, 46813), (68, 46507), (71, 46477), (73, 46468), (76, 46459), (88, 46405), (95, 46360), (96, 46339), (98, 46327), (100, 46315), (104, 46297), (120, 46216), (131, 46138),

Gene: IDyn_64 Start: 48323, Stop: 47526, Start Num: 22

Candidate Starts for IDyn_64:

(19, 48350), (Start: 22 @48323 has 24 MA's), (36, 48248), (55, 48074), (68, 47942), (71, 47912), (73, 47903), (76, 47894), (88, 47840), (95, 47795), (96, 47774), (98, 47762), (100, 47750), (104, 47732), (120, 47651), (131, 47573),

Gene: JDawG_44 Start: 29786, Stop: 30631, Start Num: 29

Candidate Starts for JDawG_44:

(1, 29225), (5, 29321), (6, 29360), (12, 29486), (13, 29522), (Start: 29 @29786 has 25 MA's), (36, 29840), (41, 29876), (44, 29903), (48, 29948), (49, 29951), (53, 29996), (67, 30152), (72, 30188), (74, 30197), (75, 30200), (97, 30329), (100, 30344), (122, 30449), (129, 30491),

Gene: Jalebi_66 Start: 46242, Stop: 47312, Start Num: 26

Candidate Starts for Jalebi_66:

(Start: 26 @46242 has 33 MA's), (46, 46374), (52, 46422), (57, 46503), (59, 46515), (60, 46524), (61, 46533), (80, 46656), (84, 46677), (91, 46704), (100, 46785), (103, 46803), (105, 46824), (119, 46902), (130, 46986), (134, 47064), (138, 47151), (141, 47283),

Gene: Jifall16_64 Start: 51698, Stop: 50877, Start Num: 22

Candidate Starts for Jifall16_64:

(Start: 22 @51698 has 24 MA's), (36, 51626), (56, 51404), (73, 51263), (76, 51254), (88, 51203), (94, 51167), (100, 51113), (104, 51095), (107, 51080), (127, 50957),

Gene: JingleBells_45 Start: 29520, Stop: 30365, Start Num: 29

Candidate Starts for JingleBells_45:

(6, 29094), (7, 29100), (10, 29124), (12, 29220), (13, 29256), (Start: 29 @29520 has 25 MA's), (36, 29574), (41, 29610), (44, 29637), (48, 29682), (49, 29685), (53, 29730), (67, 29886), (72, 29922), (74, 29931), (75, 29934), (97, 30063), (100, 30078), (122, 30183), (129, 30225),

Gene: Kabluna_68 Start: 51031, Stop: 50168, Start Num: 22

Candidate Starts for Kabluna_68:

(17, 51109), (Start: 22 @51031 has 24 MA's), (47, 50869), (56, 50743), (73, 50602), (82, 50569), (88, 50542), (96, 50476), (100, 50452), (104, 50434), (117, 50380), (121, 50350), (126, 50305),

Gene: Karate_44 Start: 30169, Stop: 31014, Start Num: 29

Candidate Starts for Karate_44:

(5, 29704), (6, 29743), (10, 29773), (13, 29905), (Start: 29 @30169 has 25 MA's), (36, 30223), (41, 30259), (44, 30286), (48, 30331), (49, 30334), (53, 30379), (67, 30535), (72, 30571), (74, 30580), (75, 30583), (97, 30712), (100, 30727), (122, 30832), (129, 30874),

Gene: Kate_46 Start: 30176, Stop: 31024, Start Num: 29

Candidate Starts for Kate_46:

(6, 29750), (10, 29780), (13, 29912), (Start: 29 @30176 has 25 MA's), (36, 30230), (41, 30266), (44, 30293), (48, 30338), (49, 30341), (53, 30386), (67, 30542), (72, 30578), (74, 30587), (75, 30590), (97, 30719), (100, 30734), (122, 30839), (129, 30881),

Gene: KidneyBean_65 Start: 51822, Stop: 51001, Start Num: 22

Candidate Starts for KidneyBean_65:

(Start: 22 @51822 has 24 MA's), (36, 51750), (56, 51528), (73, 51387), (76, 51378), (88, 51327), (94, 51291), (100, 51237), (104, 51219), (107, 51204), (127, 51081),

Gene: Kimchi1738_53 Start: 45055, Stop: 44291, Start Num: 26

Candidate Starts for Kimchi1738_53:

(Start: 26 @45055 has 33 MA's), (53, 44836), (94, 44554), (100, 44500), (115, 44455), (126, 44371),

Gene: Kors_50 Start: 31190, Stop: 32032, Start Num: 24

Candidate Starts for Kors_50:

(Start: 24 @31190 has 3 MA's), (38, 31253), (47, 31337), (48, 31349), (49, 31352), (65, 31514), (72, 31586), (87, 31649), (90, 31658), (97, 31727), (100, 31742), (129, 31889),

Gene: Krampus_45 Start: 30176, Stop: 31024, Start Num: 29

Candidate Starts for Krampus_45:

(6, 29750), (10, 29780), (13, 29912), (Start: 29 @30176 has 25 MA's), (36, 30230), (41, 30266), (44, 30293), (48, 30338), (49, 30341), (53, 30386), (67, 30542), (72, 30578), (74, 30587), (75, 30590), (97, 30719), (100, 30734), (122, 30839), (129, 30881),

Gene: Kurt_65 Start: 52057, Stop: 51236, Start Num: 22

Candidate Starts for Kurt_65:

(19, 52084), (Start: 22 @52057 has 24 MA's), (36, 51985), (56, 51763), (73, 51622), (76, 51613), (88, 51562), (94, 51526), (100, 51472), (104, 51454), (107, 51439), (127, 51316),

Gene: Lambo_65 Start: 44896, Stop: 45987, Start Num: 26

Candidate Starts for Lambo_65:

(Start: 26 @44896 has 33 MA's), (46, 45028), (52, 45076), (59, 45169), (60, 45178), (61, 45187), (80, 45310), (84, 45331), (91, 45358), (100, 45439), (103, 45457), (105, 45478), (119, 45556), (130, 45640), (136, 45805), (137, 45814), (141, 45958),

Gene: Lila22_71 Start: 45848, Stop: 46939, Start Num: 26

Candidate Starts for Lila22_71:

(Start: 26 @45848 has 33 MA's), (46, 45980), (52, 46028), (59, 46121), (60, 46130), (61, 46139), (80, 46262), (84, 46283), (91, 46310), (100, 46391), (103, 46409), (105, 46430), (119, 46508), (130, 46592), (136, 46757), (137, 46766), (141, 46910),

Gene: Lizz_64 Start: 46003, Stop: 45221, Start Num: 28

Candidate Starts for Lizz_64:

(Start: 28 @46003 has 8 MA's), (36, 45949), (39, 45940), (41, 45913), (44, 45889), (49, 45841), (58, 45736), (69, 45637), (70, 45631), (77, 45592), (82, 45571), (95, 45499), (100, 45454), (101, 45448), (110, 45430), (118, 45394), (124, 45331),

Gene: Lollipop1437_69 Start: 52704, Stop: 51925, Start Num: 20

Candidate Starts for Lollipop1437_69:

(Start: 20 @52704 has 10 MA's), (36, 52620), (73, 52272), (88, 52212), (94, 52176), (100, 52122), (104, 52104), (112, 52071), (114, 52062), (125, 51987), (127, 51975),

Gene: LuckyLeo_64 Start: 44646, Stop: 45731, Start Num: 26

Candidate Starts for LuckyLeo_64:

(Start: 26 @44646 has 33 MA's), (41, 44739), (46, 44778), (52, 44826), (60, 44928), (61, 44937), (80, 45060), (84, 45081), (87, 45096), (91, 45108), (100, 45189), (103, 45207), (105, 45228), (108, 45249), (119, 45306), (130, 45390), (140, 45690),

Gene: MacGully_73 Start: 51597, Stop: 50779, Start Num: 25

Candidate Starts for MacGully_73:

(15, 51750), (18, 51672), (Start: 25 @51597 has 1 MA's), (27, 51591), (36, 51537), (52, 51411), (60, 51294), (64, 51267), (66, 51255), (68, 51216), (72, 51183), (85, 51126), (104, 51003), (113, 50958), (132, 50805),

Gene: Marietta_66 Start: 48435, Stop: 47638, Start Num: 22

Candidate Starts for Marietta_66:

(Start: 22 @48435 has 24 MA's), (36, 48360), (55, 48186), (68, 48054), (71, 48024), (73, 48015), (76, 48006), (82, 47979), (88, 47952), (95, 47907), (98, 47874), (100, 47862), (104, 47844), (120, 47763), (131, 47685),

Gene: MerCougar_67 Start: 52388, Stop: 51525, Start Num: 22

Candidate Starts for MerCougar_67:

(Start: 22 @52388 has 24 MA's), (56, 52100), (64, 52049), (73, 51959), (84, 51917), (88, 51899), (94, 51863), (96, 51833), (100, 51809), (104, 51791),

Gene: MoiGyank_73 Start: 46170, Stop: 47240, Start Num: 26

Candidate Starts for MoiGyank_73:

(Start: 26 @46170 has 33 MA's), (46, 46302), (52, 46350), (57, 46431), (59, 46443), (60, 46452), (61, 46461), (80, 46584), (84, 46605), (91, 46632), (100, 46713), (103, 46731), (105, 46752), (119, 46830), (130, 46914), (134, 46992), (138, 47079), (141, 47211),

Gene: MortySmith_43 Start: 29204, Stop: 30049, Start Num: 29

Candidate Starts for MortySmith_43:

(6, 28778), (10, 28808), (11, 28835), (12, 28904), (13, 28940), (Start: 29 @29204 has 25 MA's), (36, 29258), (41, 29294), (44, 29321), (48, 29366), (49, 29369), (53, 29414), (67, 29570), (72, 29606), (74, 29615), (75, 29618), (97, 29747), (100, 29762), (122, 29867), (129, 29909),

Gene: NadineRae_65 Start: 48044, Stop: 47247, Start Num: 22

Candidate Starts for NadineRae_65:

(Start: 22 @48044 has 24 MA's), (36, 47969), (68, 47663), (71, 47633), (73, 47624), (76, 47615), (88, 47561), (95, 47516), (96, 47495), (98, 47483), (100, 47471), (104, 47453), (120, 47372), (131, 47294),

Gene: NarutoRun_45 Start: 30144, Stop: 30992, Start Num: 29

Candidate Starts for NarutoRun_45:

(6, 29718), (10, 29748), (13, 29880), (Start: 29 @30144 has 25 MA's), (36, 30198), (41, 30234), (44, 30261), (48, 30306), (49, 30309), (53, 30354), (67, 30510), (72, 30546), (74, 30555), (75, 30558), (97, 30687), (100, 30702), (122, 30807), (129, 30849),

Gene: NatB6_65 Start: 51126, Stop: 50305, Start Num: 22

Candidate Starts for NatB6_65:

(19, 51153), (Start: 22 @51126 has 24 MA's), (36, 51054), (56, 50832), (73, 50691), (76, 50682), (88, 50631), (94, 50595), (100, 50541), (104, 50523), (107, 50508), (127, 50385),

Gene: Neptune_45 Start: 30144, Stop: 30992, Start Num: 29

Candidate Starts for Neptune_45:

(6, 29718), (10, 29748), (13, 29880), (Start: 29 @30144 has 25 MA's), (36, 30198), (41, 30234), (44, 30261), (48, 30306), (49, 30309), (53, 30354), (67, 30510), (72, 30546), (74, 30555), (75, 30558), (97, 30687), (100, 30702), (122, 30807), (129, 30849),

Gene: NorManre_71 Start: 46296, Stop: 47387, Start Num: 26

Candidate Starts for NorManre_71:

(Start: 26 @46296 has 33 MA's), (46, 46428), (52, 46476), (59, 46569), (60, 46578), (61, 46587), (80, 46710), (84, 46731), (91, 46758), (100, 46839), (103, 46857), (105, 46878), (119, 46956), (130, 47040), (136, 47205), (137, 47214), (141, 47358),

Gene: NosilaM_67 Start: 51702, Stop: 50839, Start Num: 22

Candidate Starts for NosilaM_67:

(Start: 22 @51702 has 24 MA's), (47, 51540), (56, 51414), (73, 51273), (82, 51240), (88, 51213), (90, 51207), (96, 51147), (100, 51123), (104, 51105), (117, 51051), (121, 51021), (126, 50976),

Gene: NovaSharks_69 Start: 44064, Stop: 45134, Start Num: 26

Candidate Starts for NovaSharks_69:

(Start: 26 @44064 has 33 MA's), (42, 44160), (46, 44196), (52, 44244), (59, 44337), (60, 44346), (61, 44355), (80, 44478), (84, 44499), (91, 44526), (100, 44607), (103, 44625), (105, 44646), (119, 44724), (130, 44808), (141, 45105),

Gene: NovumRegina_65 Start: 51435, Stop: 50614, Start Num: 22

Candidate Starts for NovumRegina_65:

(19, 51462), (Start: 22 @51435 has 24 MA's), (36, 51363), (56, 51141), (73, 51000), (76, 50991), (88, 50940), (94, 50904), (100, 50850), (104, 50832), (107, 50817), (127, 50694),

Gene: OtterstedtS21_67 Start: 45230, Stop: 46321, Start Num: 26

Candidate Starts for OtterstedtS21_67:

(Start: 26 @45230 has 33 MA's), (46, 45362), (52, 45410), (57, 45491), (59, 45503), (60, 45512), (61, 45521), (80, 45644), (84, 45665), (91, 45692), (100, 45773), (103, 45791), (105, 45812), (119, 45890), (130, 45974), (136, 46139), (137, 46148), (141, 46292),

Gene: Outis_66 Start: 51894, Stop: 51040, Start Num: 23

Candidate Starts for Outis_66:

(Start: 23 @51894 has 2 MA's), (56, 51615), (64, 51564), (73, 51474), (84, 51432), (88, 51414), (94, 51378), (96, 51348), (100, 51324), (104, 51306),

Gene: OverHedge_46 Start: 30134, Stop: 30982, Start Num: 29

Candidate Starts for OverHedge_46:

(6, 29708), (10, 29738), (13, 29870), (Start: 29 @30134 has 25 MA's), (36, 30188), (41, 30224), (44, 30251), (48, 30296), (49, 30299), (53, 30344), (67, 30500), (72, 30536), (74, 30545), (75, 30548), (97, 30677), (100, 30692), (122, 30797), (129, 30839),

Gene: P1201_70 Start: 52915, Stop: 52136, Start Num: 28

Candidate Starts for P1201_70:

(Start: 28 @52915 has 8 MA's), (36, 52858), (37, 52855), (54, 52684), (60, 52621), (86, 52456), (95, 52405), (100, 52360), (101, 52354), (111, 52336),

Gene: PHTowN_64 Start: 46001, Stop: 45219, Start Num: 28

Candidate Starts for PHTowN_64:

(Start: 28 @46001 has 8 MA's), (36, 45947), (39, 45938), (41, 45911), (44, 45887), (49, 45839), (58, 45734), (69, 45635), (70, 45629), (77, 45590), (82, 45569), (95, 45497), (100, 45452), (101, 45446), (110, 45428), (118, 45392), (124, 45329),

Gene: ParvusTarda_66 Start: 44602, Stop: 45693, Start Num: 26

Candidate Starts for ParvusTarda_66:

(Start: 26 @44602 has 33 MA's), (46, 44734), (52, 44782), (59, 44875), (60, 44884), (61, 44893), (80, 45016), (84, 45037), (91, 45064), (100, 45145), (103, 45163), (105, 45184), (119, 45262), (130, 45346), (136, 45511), (137, 45520), (141, 45664),

Gene: Patio_67 Start: 51761, Stop: 50982, Start Num: 20

Candidate Starts for Patio_67:

(Start: 20 @51761 has 10 MA's), (36, 51677), (73, 51329), (88, 51269), (94, 51233), (100, 51179), (104, 51161), (112, 51128), (114, 51119), (125, 51044), (127, 51032),

Gene: Patos_71 Start: 46295, Stop: 47386, Start Num: 26

Candidate Starts for Patos_71:

(Start: 26 @46295 has 33 MA's), (46, 46427), (52, 46475), (59, 46568), (60, 46577), (61, 46586), (80, 46709), (84, 46730), (91, 46757), (100, 46838), (103, 46856), (105, 46877), (119, 46955), (130, 47039), (136, 47204), (137, 47213), (141, 47357),

Gene: Penjamin420_68 Start: 45399, Stop: 46469, Start Num: 26

Candidate Starts for Penjamin420_68:

(Start: 26 @45399 has 33 MA's), (46, 45531), (52, 45579), (59, 45672), (60, 45681), (61, 45690), (80, 45813), (84, 45834), (91, 45861), (100, 45942), (103, 45960), (105, 45981), (119, 46059), (130, 46143), (134, 46221), (138, 46308), (141, 46440),

Gene: PeteyPab_53 Start: 45339, Stop: 44575, Start Num: 26

Candidate Starts for PeteyPab_53:

(Start: 26 @45339 has 33 MA's), (53, 45120), (60, 45045), (94, 44838), (100, 44784), (115, 44739), (126, 44655),

Gene: Pharpay_45 Start: 30189, Stop: 31037, Start Num: 29

Candidate Starts for Pharpay_45:

(6, 29763), (10, 29793), (13, 29925), (Start: 29 @30189 has 25 MA's), (36, 30243), (41, 30279), (44, 30306), (48, 30351), (49, 30354), (53, 30399), (67, 30555), (72, 30591), (74, 30600), (75, 30603), (97, 30732), (100, 30747), (122, 30852), (129, 30894),

Gene: Phomeo_64 Start: 51694, Stop: 50873, Start Num: 22

Candidate Starts for Phomeo_64:

(Start: 22 @51694 has 24 MA's), (36, 51622), (56, 51400), (73, 51259), (76, 51250), (88, 51199), (94, 51163), (100, 51109), (104, 51091), (107, 51076), (127, 50953),

Gene: PhunaPhoke_45 Start: 30162, Stop: 31010, Start Num: 29

Candidate Starts for PhunaPhoke_45:

(6, 29736), (10, 29766), (13, 29898), (Start: 29 @30162 has 25 MA's), (36, 30216), (41, 30252), (44, 30279), (48, 30324), (49, 30327), (53, 30372), (67, 30528), (72, 30564), (74, 30573), (75, 30576), (97, 30705), (100, 30720), (122, 30825), (129, 30867),

Gene: Pleakley_74 Start: 51254, Stop: 50463, Start Num: 20

Candidate Starts for Pleakley_74:

(Start: 20 @51254 has 10 MA's), (36, 51158), (60, 50924), (73, 50813), (76, 50804), (81, 50786), (83, 50774), (88, 50753), (100, 50663), (104, 50645), (107, 50630), (120, 50570),

Gene: PotatoChip_54 Start: 45341, Stop: 44577, Start Num: 26

Candidate Starts for PotatoChip_54:

(Start: 26 @45341 has 33 MA's), (53, 45122), (60, 45047), (94, 44840), (100, 44786), (115, 44741), (126, 44657),

Gene: Potty_45 Start: 30167, Stop: 31015, Start Num: 29

Candidate Starts for Potty_45:

(6, 29741), (10, 29771), (13, 29903), (Start: 29 @30167 has 25 MA's), (36, 30221), (41, 30257), (44, 30284), (48, 30329), (49, 30332), (53, 30377), (67, 30533), (72, 30569), (74, 30578), (75, 30581), (97, 30710), (100, 30725), (122, 30830), (129, 30872),

Gene: Poultruss_45 Start: 30482, Stop: 31330, Start Num: 29

Candidate Starts for Poultruss_45:

(1, 29921), (5, 30017), (6, 30056), (10, 30086), (12, 30182), (13, 30218), (Start: 29 @30482 has 25 MA's), (36, 30536), (41, 30572), (44, 30599), (48, 30644), (49, 30647), (53, 30692), (67, 30848), (72, 30884), (74, 30893), (75, 30896), (97, 31025), (100, 31040), (122, 31145), (129, 31187),

Gene: Rachella_45 Start: 30170, Stop: 31018, Start Num: 29

Candidate Starts for Rachella_45:

(6, 29744), (10, 29774), (13, 29906), (Start: 29 @30170 has 25 MA's), (36, 30224), (41, 30260), (44, 30287), (48, 30332), (49, 30335), (53, 30380), (67, 30536), (72, 30572), (74, 30581), (75, 30584), (97, 30713), (100, 30728), (122, 30833), (129, 30875),

Gene: Ranch_67 Start: 44074, Stop: 45165, Start Num: 26

Candidate Starts for Ranch_67:

(Start: 26 @44074 has 33 MA's), (46, 44206), (52, 44254), (59, 44347), (60, 44356), (61, 44365), (80, 44488), (84, 44509), (91, 44536), (100, 44617), (103, 44635), (105, 44656), (119, 44734), (130, 44818), (136, 44983), (137, 44992), (141, 45136),

Gene: Rie18_45 Start: 29667, Stop: 30512, Start Num: 29

Candidate Starts for Rie18_45:

(8, 29262), (10, 29271), (Start: 29 @29667 has 25 MA's), (34, 29709), (36, 29721), (41, 29757), (44, 29784), (48, 29829), (49, 29832), (53, 29877), (67, 30033), (72, 30069), (74, 30078), (75, 30081), (97, 30210), (100, 30225), (122, 30330), (129, 30372),

Gene: RikSengupta_49 Start: 31227, Stop: 32069, Start Num: 24

Candidate Starts for RikSengupta_49:

(14, 30993), (Start: 24 @31227 has 3 MA's), (38, 31290), (47, 31374), (48, 31386), (49, 31389), (65, 31551), (67, 31587), (72, 31623), (87, 31686), (90, 31695), (97, 31764), (100, 31779), (129, 31926),

Gene: Rooney_64 Start: 46156, Stop: 45371, Start Num: 28

Candidate Starts for Rooney_64:

(Start: 28 @46156 has 8 MA's), (36, 46102), (39, 46093), (41, 46066), (44, 46042), (49, 45994), (58, 45889), (69, 45790), (70, 45784), (77, 45745), (82, 45724), (95, 45652), (100, 45607), (101, 45601),

(110, 45583), (116, 45556), (124, 45484),

Gene: Rumi_68 Start: 43761, Stop: 44831, Start Num: 26

Candidate Starts for Rumi_68:

(Start: 26 @43761 has 33 MA's), (42, 43857), (46, 43893), (52, 43941), (59, 44034), (60, 44043), (61, 44052), (80, 44175), (84, 44196), (91, 44223), (100, 44304), (103, 44322), (105, 44343), (119, 44421), (130, 44505), (141, 44802),

Gene: Sadboi_68 Start: 45890, Stop: 46960, Start Num: 26

Candidate Starts for Sadboi_68:

(Start: 26 @45890 has 33 MA's), (46, 46022), (52, 46070), (59, 46163), (60, 46172), (61, 46181), (80, 46304), (84, 46325), (91, 46352), (100, 46433), (103, 46451), (105, 46472), (119, 46550), (130, 46634), (138, 46799), (141, 46931),

Gene: Sampudon_67 Start: 46242, Stop: 47312, Start Num: 26

Candidate Starts for Sampudon_67:

(Start: 26 @46242 has 33 MA's), (46, 46374), (52, 46422), (57, 46503), (59, 46515), (60, 46524), (61, 46533), (80, 46656), (84, 46677), (91, 46704), (100, 46785), (103, 46803), (105, 46824), (119, 46902), (130, 46986), (134, 47064), (138, 47151), (141, 47283),

Gene: ShakeNBake_64 Start: 46028, Stop: 45246, Start Num: 28

Candidate Starts for ShakeNBake_64:

(Start: 28 @46028 has 8 MA's), (36, 45974), (39, 45965), (41, 45938), (44, 45914), (49, 45866), (58, 45761), (69, 45662), (70, 45656), (77, 45617), (82, 45596), (95, 45524), (100, 45479), (101, 45473), (110, 45455), (118, 45419), (124, 45356),

Gene: Skysand_67 Start: 52239, Stop: 51460, Start Num: 20

Candidate Starts for Skysand_67:

(Start: 20 @52239 has 10 MA's), (36, 52155), (46, 52080), (73, 51807), (88, 51747), (94, 51711), (100, 51657), (104, 51639), (112, 51606), (114, 51597), (125, 51522), (127, 51510),

Gene: Snakehole_45 Start: 29347, Stop: 30192, Start Num: 29

Candidate Starts for Snakehole_45:

(6, 28921), (7, 28927), (10, 28951), (13, 29083), (Start: 29 @29347 has 25 MA's), (36, 29401), (41, 29437), (44, 29464), (48, 29509), (49, 29512), (53, 29557), (67, 29713), (72, 29749), (74, 29758), (75, 29761), (97, 29890), (100, 29905), (122, 30010), (129, 30052),

Gene: Sparcetus_49 Start: 31104, Stop: 31946, Start Num: 24

Candidate Starts for Sparcetus_49:

(Start: 24 @31104 has 3 MA's), (38, 31167), (47, 31251), (48, 31263), (49, 31266), (65, 31428), (67, 31464), (72, 31500), (87, 31563), (90, 31572), (97, 31641), (100, 31656), (129, 31803),

Gene: StarStruck_66 Start: 51894, Stop: 51040, Start Num: 23

Candidate Starts for StarStruck_66:

(Start: 23 @51894 has 2 MA's), (56, 51615), (64, 51564), (73, 51474), (84, 51432), (88, 51414), (94, 51378), (96, 51348), (100, 51324), (104, 51306),

Gene: Stickynote_54 Start: 45345, Stop: 44581, Start Num: 26

Candidate Starts for Stickynote_54:

(Start: 26 @45345 has 33 MA's), (53, 45126), (94, 44844), (100, 44790), (115, 44745), (126, 44661),

Gene: Sukkupi_66 Start: 50275, Stop: 49478, Start Num: 22

Candidate Starts for Sukkupi_66:

(16, 50374), (19, 50302), (Start: 22 @50275 has 24 MA's), (36, 50200), (55, 50026), (68, 49894), (71, 49864), (73, 49855), (76, 49846), (82, 49819), (88, 49792), (95, 49747), (98, 49714), (100, 49702), (104, 49684), (120, 49603), (131, 49525),

Gene: SuperSulley_67 Start: 52253, Stop: 51390, Start Num: 22

Candidate Starts for SuperSulley_67:

(17, 52331), (Start: 22 @52253 has 24 MA's), (47, 52091), (56, 51965), (73, 51824), (82, 51791), (88, 51764), (90, 51758), (96, 51698), (100, 51674), (104, 51656), (117, 51602), (121, 51572), (126, 51527),

Gene: Tedro_45 Start: 29601, Stop: 30446, Start Num: 29

Candidate Starts for Tedro_45:

(6, 29175), (10, 29205), (12, 29301), (13, 29337), (Start: 29 @29601 has 25 MA's), (36, 29655), (41, 29691), (44, 29718), (48, 29763), (49, 29766), (53, 29811), (67, 29967), (72, 30003), (74, 30012), (75, 30015), (97, 30144), (100, 30159), (122, 30264), (129, 30306),

Gene: Tillicus_63 Start: 44587, Stop: 45672, Start Num: 26

Candidate Starts for Tillicus_63:

(Start: 26 @44587 has 33 MA's), (40, 44668), (41, 44680), (44, 44704), (46, 44719), (52, 44767), (59, 44860), (60, 44869), (61, 44878), (80, 45001), (84, 45022), (91, 45049), (100, 45130), (103, 45148), (105, 45169), (108, 45190), (119, 45247), (130, 45331),

Gene: TinyMiny_49 Start: 31125, Stop: 31967, Start Num: 24

Candidate Starts for TinyMiny_49:

(14, 30891), (Start: 24 @31125 has 3 MA's), (38, 31188), (47, 31272), (48, 31284), (49, 31287), (65, 31449), (67, 31485), (72, 31521), (87, 31584), (90, 31593), (97, 31662), (100, 31677), (129, 31824),

Gene: Tracker_65 Start: 50870, Stop: 50052, Start Num: 22

Candidate Starts for Tracker_65:

(19, 50897), (Start: 22 @50870 has 24 MA's), (36, 50798), (56, 50576), (73, 50435), (76, 50426), (88, 50375), (94, 50339), (100, 50285), (104, 50267), (107, 50252),

Gene: Turuncu_68 Start: 51816, Stop: 51037, Start Num: 20

Candidate Starts for Turuncu_68:

(Start: 20 @51816 has 10 MA's), (36, 51729), (71, 51390), (73, 51381), (82, 51348), (88, 51321), (94, 51291), (100, 51237), (101, 51231), (104, 51219), (106, 51213), (114, 51177), (121, 51141),

Gene: Wentworth_64 Start: 46130, Stop: 45360, Start Num: 28

Candidate Starts for Wentworth_64:

(Start: 28 @46130 has 8 MA's), (33, 46088), (36, 46076), (37, 46073), (41, 46040), (49, 45968), (56, 45869), (69, 45764), (70, 45758), (77, 45719), (82, 45698), (93, 45641), (100, 45581), (101, 45575), (116, 45530), (118, 45521),

Gene: Wheezy_65 Start: 51084, Stop: 50263, Start Num: 22

Candidate Starts for Wheezy_65:

(19, 51111), (Start: 22 @51084 has 24 MA's), (36, 51012), (56, 50790), (73, 50649), (76, 50640), (88, 50589), (94, 50553), (100, 50499), (104, 50481), (107, 50466),

Gene: WhoseManz_65 Start: 48102, Stop: 47305, Start Num: 22

Candidate Starts for WhoseManz_65:

(Start: 22 @48102 has 24 MA's), (36, 48027), (68, 47721), (71, 47691), (73, 47682), (76, 47673), (82, 47646), (88, 47619), (95, 47574), (98, 47541), (100, 47529), (104, 47511), (120, 47430), (131, 47352),

Gene: Wilkos_66 Start: 46285, Stop: 45515, Start Num: 28

Candidate Starts for Wilkos_66:

(Start: 28 @46285 has 8 MA's), (32, 46258), (33, 46243), (36, 46231), (37, 46228), (41, 46195), (44, 46171), (45, 46168), (47, 46138), (56, 46024), (69, 45919), (70, 45913), (77, 45874), (82, 45853), (93, 45796), (100, 45736), (101, 45730), (118, 45676),

Gene: Wojtek_63 Start: 44323, Stop: 45414, Start Num: 26

Candidate Starts for Wojtek_63:

(Start: 26 @44323 has 33 MA's), (40, 44404), (41, 44416), (46, 44455), (52, 44503), (59, 44596), (60, 44605), (61, 44614), (80, 44737), (84, 44758), (91, 44785), (100, 44866), (103, 44884), (105, 44905), (119, 44983), (130, 45067), (134, 45145), (136, 45232),

Gene: Wollypog_48 Start: 34784, Stop: 35608, Start Num: 29

Candidate Starts for Wollypog_48:

(Start: 29 @34784 has 25 MA's), (35, 34832), (36, 34838), (37, 34841), (44, 34898), (62, 35081), (63, 35084), (71, 35174), (79, 35201), (83, 35222), (99, 35324), (100, 35333),

Gene: Xenia2_66 Start: 44090, Stop: 45202, Start Num: 26

Candidate Starts for Xenia2_66:

(Start: 26 @44090 has 33 MA's), (41, 44186), (46, 44225), (52, 44273), (57, 44354), (59, 44366), (60, 44375), (61, 44384), (84, 44528), (100, 44636), (103, 44654), (105, 44675), (109, 44699), (110, 44702), (119, 44753), (133, 44894), (141, 45170),

Gene: Yara_60 Start: 44990, Stop: 44223, Start Num: 28

Candidate Starts for Yara_60:

(Start: 28 @44990 has 8 MA's), (32, 44963), (36, 44936), (39, 44927), (41, 44900), (77, 44579), (78, 44576), (82, 44558), (88, 44531), (101, 44435), (129, 44297),

Gene: Yikes_69 Start: 46336, Stop: 47406, Start Num: 26

Candidate Starts for Yikes_69:

(Start: 26 @46336 has 33 MA's), (46, 46468), (52, 46516), (59, 46609), (60, 46618), (61, 46627), (80, 46750), (84, 46771), (91, 46798), (100, 46879), (103, 46897), (105, 46918), (119, 46996), (130, 47080), (138, 47245), (141, 47377),

Gene: Yndexa_66 Start: 50275, Stop: 49478, Start Num: 22

Candidate Starts for Yndexa_66:

(16, 50374), (19, 50302), (Start: 22 @50275 has 24 MA's), (36, 50200), (55, 50026), (68, 49894), (71, 49864), (73, 49855), (76, 49846), (82, 49819), (88, 49792), (95, 49747), (98, 49714), (100, 49702), (104, 49684), (120, 49603), (131, 49525),

Gene: Zany_65 Start: 45737, Stop: 46807, Start Num: 26

Candidate Starts for Zany_65:

(Start: 26 @45737 has 33 MA's), (46, 45869), (52, 45917), (59, 46010), (60, 46019), (61, 46028), (80, 46151), (84, 46172), (91, 46199), (100, 46280), (103, 46298), (105, 46319), (119, 46397), (130, 46481), (138, 46646), (141, 46778),

Gene: Zion_54 Start: 45339, Stop: 44575, Start Num: 26

Candidate Starts for Zion_54:

(Start: 26 @45339 has 33 MA's), (53, 45120), (60, 45045), (94, 44838), (100, 44784), (115, 44739), (126, 44655),