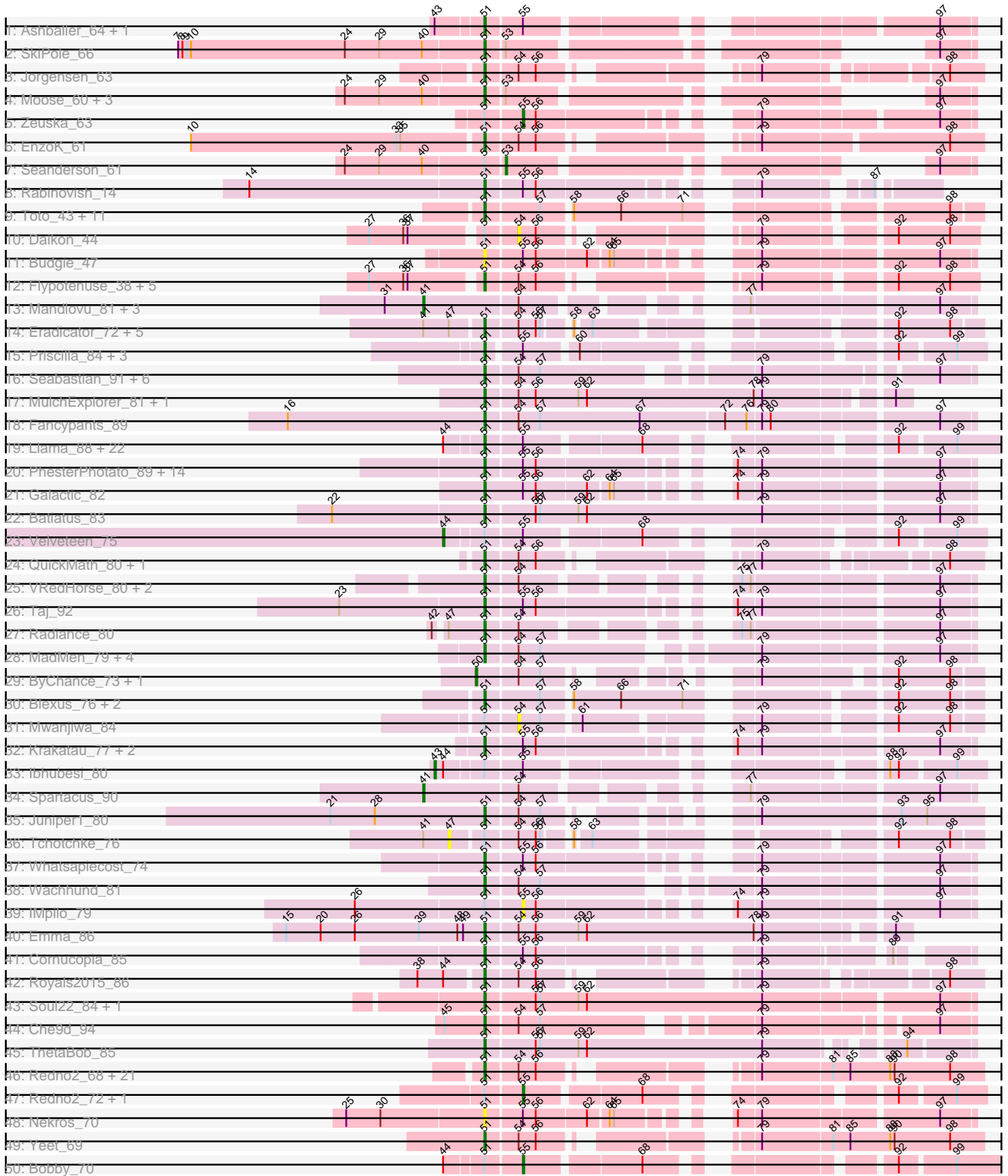
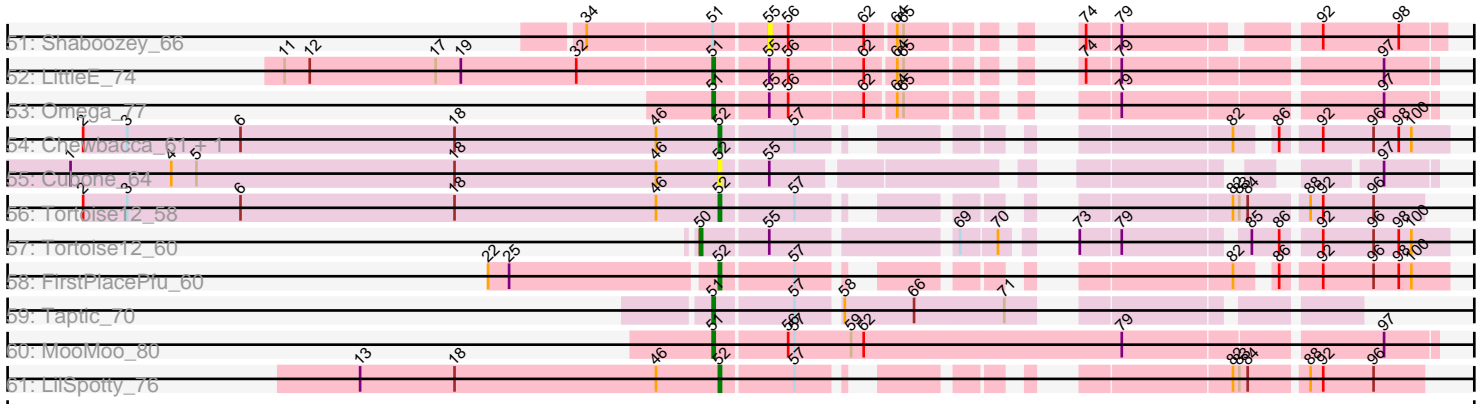


Pham 294472



Pham 294472



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 294472 Report

This analysis was run 04/18/26 on database version 643.

Pham number 294472 has 171 members, 13 are drafts.

Phages represented in each track:

- Track 1 : Ashballer_64, JC27_64
- Track 2 : SkiPole_66
- Track 3 : Jorgensen_63
- Track 4 : Moose_60, SwissCheese_62, Forsytheast_60, Bruns_60
- Track 5 : Zeuska_63
- Track 6 : EnzoK_61
- Track 7 : Seanderson_61
- Track 8 : Rabinovish_14
- Track 9 : Toto_43, ABCat_42, Inca_41, BilboSwaggins_43, IHOP_42, Tuco_45, CrystalP_44, Myrale_44, Phaja_42, StellaBean_42, ShamWow_44, Marshmallow_43
- Track 10 : Daikon_44
- Track 11 : Budgie_47
- Track 12 : Flypotenuse_38, Glexan_41, Traaww1_40, Balomoji_42, Gator_41, Harella_43
- Track 13 : Mandlovu_81, Hlubikazi_81, Hades_81, Strokeseat_81
- Track 14 : Eradicator_72, KashFlow_68, Cali_17, Sprinklers_16, BadAgartude_17, SuperGrey_82
- Track 15 : Priscilla_84, NormanBulbieJr_82, Spartacus_87, Koella_76
- Track 16 : Seabastian_91, OfUltron_91, Nichirin_83, Ochi17_89, Jinglebell_90, Llama_90, Modragons_88
- Track 17 : MulchExplorer_81, Kimberlium_83
- Track 18 : Fancypants_89
- Track 19 : Llama_88, Ochi17_87, Seabastian_89, FeliMaine_10, Lilbit_10, Marvin_8, OfUltron_89, Pringar_9, BAKA_82, Duke13_80, LittleLaf_9, Corazon_9, Zerg_82, Guppsters_76, Jinglebell_88, Beelzebub_12, Huphlepuuff_10, Clarkson_10, Minerva_79, Pound_77, JoieB_10, Nichirin_81, Modragons_86
- Track 20 : PhesterPhotato_89, Phalconet_82, Byougenkin_82, Royals2015_90, Tweety_86, Quico_91, Wee_91, PopTart_77, Eish_88, Medindi_89, Girafales_91, SassyB_77, Florinda_94, DeadP_86, Blexus_80
- Track 21 : Galactic_82
- Track 22 : Batiatus_83
- Track 23 : Velveteen_75
- Track 24 : QuickMath_80, Juice456_78
- Track 25 : VRedHorse_80, Pacc40_73, Cornucopia_81
- Track 26 : Taj_92
- Track 27 : Radiance_80
- Track 28 : MadMen_79, Sabbb_83, Karhdo_80, Renaud18_93, Kersh_83

- Track 29 : ByChance_73, ShowerHandel_82
- Track 30 : Blexus_76, Leozinho_79, Pippy_76
- Track 31 : Mwanjiwa_84
- Track 32 : Krakatau_77, Job42_84, BuzzLyseyear_92
- Track 33 : Ibhubesi_80
- Track 34 : Spartacus_90
- Track 35 : Juniper1_80
- Track 36 : Tchotchke_76
- Track 37 : Whatsapiecost_74
- Track 38 : Wachhund_81
- Track 39 : IMpilo_79
- Track 40 : Emma_86
- Track 41 : Cornucopia_85
- Track 42 : Royals2015_86
- Track 43 : Soul22_84, Llij_80
- Track 44 : Che9d_94
- Track 45 : ThetaBob_85
- Track 46 : Redno2_68, Schatzie_66, Pound_75, Kalah2_66, Ejimix_71, DmpstrDiver_71, Superphikiman_69, Beem_71, JuicyJay_70, NihilNomen_72, Marleymoo_65, ThreeRngTarjay_69, Halley_73, Dallas_70, Odette_70, Minerva_77, HokkenD_64, Klein_71, Lucky2013_69, Zelink_69, Wanda_75, Hughesyang_70
- Track 47 : Redno2_72, Lucky2013_73
- Track 48 : Nekros_70
- Track 49 : Yeet_69
- Track 50 : Bobby_70
- Track 51 : Shaboozey_66
- Track 52 : LittleE_74
- Track 53 : Omega_77
- Track 54 : Chewbacca_61, ZenTime222_56
- Track 55 : Cubone_64
- Track 56 : Tortoise12_58
- Track 57 : Tortoise12_60
- Track 58 : FirstPlacePfu_60
- Track 59 : Taptic_70
- Track 60 : MooMoo_80
- Track 61 : LilSpotty_76

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

The start number called the most often in the published annotations is 51, it was called in 138 of the 158 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- ABCat_42, Ashballer_64, BAKA_82, BadAgartude_17, Balomoji_42, Batiatus_83, Beelzebub_12, Beem_71, BilboSwaggins_43, Blexus_76, Blexus_80, Bruns_60, Budgie_47, BuzzLyseyear_92, Byougenkin_82, Cali_17, Che9d_94, Clarkson_10, Corazon_9, Cornucopia_81, Cornucopia_85, CrystalP_44, Dallas_70, DeadP_86, DmpstrDiver_71, Duke13_80, Eish_88, Ejimix_71, Emma_86, EnzoK_61, Eradicator_72, Fancypants_89, FeliMaine_10, Florinda_94, Flypotenuse_38, Forsytheast_60, Galactic_82, Gator_41, Girafales_91, Glexan_41, Guppsters_76,

Halley_73, Harella_43, HokkenD_64, Hughesyang_70, Huphlepuuff_10, IHOP_42, Inca_41, JC27_64, Jinglebell_88, Jinglebell_90, Job42_84, JoieB_10, Jorgensen_63, Juice456_78, JuicyJay_70, Juniper1_80, Kalah2_66, Karhdo_80, KashFlow_68, Kersh_83, Kimberlium_83, Klein_71, Koella_76, Krakatau_77, Leozinho_79, Lilbit_10, LittleE_74, LittleLaf_9, Llama_88, Llama_90, Llij_80, Lucky2013_69, MadMen_79, Marleymoo_65, Marshmallow_43, Marvin_8, Medindi_89, Minerva_77, Minerva_79, Modragons_86, Modragons_88, MooMoo_80, Moose_60, MulchExplorer_81, Myrale_44, Nekros_70, Nichirin_81, Nichirin_83, NihilNomen_72, NormanBulbieJr_82, Ochi17_87, Ochi17_89, Odette_70, OfUltron_89, OfUltron_91, Omega_77, Pacc40_73, Phaja_42, Phalconet_82, PhesterPhotato_89, Pippy_76, PopTart_77, Pound_75, Pound_77, Pringar_9, Priscilla_84, QuickMath_80, Quico_91, Rabinovish_14, Radiance_80, Redno2_68, Renaud18_93, Royals2015_86, Royals2015_90, Sabbb_83, SassyB_77, Schatzie_66, Seabastian_89, Seabastian_91, ShamWow_44, SkiPole_66, Soul22_84, Spartacus_87, Sprinklers_16, StellaBean_42, SuperGrey_82, Superphikiman_69, SwissCheese_62, Taj_92, Taptic_70, ThetaBob_85, ThreeRngTarjay_69, Toto_43, Traaww1_40, Tuco_45, Tweety_86, VRedHorse_80, Wachhund_81, Wanda_75, Wee_91, Whatsapiecost_74, Yeet_69, Zelink_69, Zerg_82,

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

- Bobby_70, Daikon_44, IMpilo_79, Ibhubesi_80, Lucky2013_73, Mwanjiwa_84, Redno2_72, Seanderson_61, Shaboozey_66, Tchotchke_76, Velveteen_75, Zeuska_63,

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

- ByChance_73, Chewbacca_61, Cubone_64, FirstPlacePfu_60, Hades_81, Hlubikazi_81, LilSpotty_76, Mandlovu_81, ShowerHandel_82, Spartacus_90, Strokeseat_81, Tortoise12_58, Tortoise12_60, ZenTime222_56,

Summary by start number:

Start 41:

- Found in 12 of 171 (7.0%) of genes in pham
- Manual Annotations of this start: 5 of 158
- Called 41.7% of time when present
- Phage (with cluster) where this start called: Hades_81 (F1), Hlubikazi_81 (F1), Mandlovu_81 (F1), Spartacus_90 (F1), Strokeseat_81 (F1),

Start 43:

- Found in 3 of 171 (1.8%) of genes in pham
- Manual Annotations of this start: 1 of 158
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Ibhubesi_80 (F1),

Start 44:

- Found in 27 of 171 (15.8%) of genes in pham
- Manual Annotations of this start: 1 of 158
- Called 3.7% of time when present
- Phage (with cluster) where this start called: Velveteen_75 (F1),

Start 47:

- Found in 8 of 171 (4.7%) of genes in pham
- No Manual Annotations of this start.

- Called 12.5% of time when present
- Phage (with cluster) where this start called: Tchotchke_76 (F1),

Start 50:

- Found in 3 of 171 (1.8%) of genes in pham
- Manual Annotations of this start: 3 of 158
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ByChance_73 (F1), ShowerHandel_82 (F1), Tortoise12_60 (N),

Start 51:

- Found in 157 of 171 (91.8%) of genes in pham
- Manual Annotations of this start: 138 of 158
- Called 92.4% of time when present
- Phage (with cluster) where this start called: ABCat_42 (E), Ashballer_64 (A1), BAKA_82 (J), BadAgartude_17 (C1), Balomoji_42 (E), Batiatus_83 (F1), Beelzebub_12 (S), Beem_71 (J), BilboSwaggins_43 (E), Blexus_76 (F1), Blexus_80 (F1), Bruns_60 (A1), Budgie_47 (E), BuzzLyseyear_92 (F1), Byougenkin_82 (F1), Cali_17 (C1), Che9d_94 (F2), Clarkson_10 (S), Corazon_9 (S), Cornucopia_81 (F1), Cornucopia_85 (F1), CrystalP_44 (E), Dallas_70 (J), DeadP_86 (F1), DmpstrDiver_71 (J), Duke13_80 (J), Eish_88 (F1), Ejimix_71 (J), Emma_86 (F1), EnzoK_61 (A1), Eradicator_72 (F1), Fancypants_89 (F1), FeliMaine_10 (S), Florinda_94 (F1), Flypotenuse_38 (E), Forsytheast_60 (A1), Galactic_82 (F1), Gator_41 (E), Girafales_91 (F1), Glexan_41 (E), Guppsters_76 (F1), Halley_73 (J), Harella_43 (E), HokkenD_64 (J), Hughesyang_70 (J), Huphlepuuff_10 (S), IHOP_42 (E), Inca_41 (E), JC27_64 (A1), Jinglebell_88 (F1), Jinglebell_90 (F1), Job42_84 (F1), JoieB_10 (S), Jorgensen_63 (A1), Juice456_78 (F1), JuicyJay_70 (J), Juniper1_80 (F1), Kalah2_66 (J), Karhdo_80 (F1), KashFlow_68 (J), Kersh_83 (F1), Kimberlium_83 (F1), Klein_71 (J), Koella_76 (F1), Krakatau_77 (F1), Leozinho_79 (F1), Lilbit_10 (S), LittleE_74 (J), LittleLaf_9 (S), Llama_88 (F1), Llama_90 (F1), Llij_80 (F1), Lucky2013_69 (J), MadMen_79 (F1), Marleymoo_65 (J), Marshmallow_43 (E), Marvin_8 (S), Medindi_89 (F1), Minerva_77 (J), Minerva_79 (J), Modragons_86 (F1), Modragons_88 (F1), MooMoo_80 (singleton), Moose_60 (A1), MulchExplorer_81 (F1), Myrale_44 (E), Nekros_70 (J), Nichirin_81 (F1), Nichirin_83 (F1), NihilNomen_72 (J), NormanBulbieJr_82 (F1), Ochi17_87 (F1), Ochi17_89 (F1), Odette_70 (J), OfUltron_89 (F1), OfUltron_91 (F1), Omega_77 (J), Pacc40_73 (F1), Phaja_42 (E), Phalconet_82 (F1), PhesterPotato_89 (F1), Pippy_76 (F1), PopTart_77 (F1), Pound_75 (J), Pound_77 (J), Pringar_9 (S), Priscilla_84 (F1), QuickMath_80 (F1), Quico_91 (F1), Rabinovish_14 (C1), Radiance_80 (F1), Redno2_68 (J), Renaud18_93 (F4), Royals2015_86 (F1), Royals2015_90 (F1), Sabbb_83 (F1), SassyB_77 (F1), Schatzie_66 (J), Seabastian_89 (F1), Seabastian_91 (F1), ShamWow_44 (E), SkiPole_66 (A1), Soul22_84 (F2), Spartacus_87 (F1), Sprinklers_16 (C1), StellaBean_42 (E), SuperGrey_82 (F1), Superphikiman_69 (J), SwissCheese_62 (A1), Taj_92 (F1), Taptic_70 (W), ThetaBob_85 (F4), ThreeRngTarjay_69 (J), Toto_43 (E), Traaww1_40 (E), Tuco_45 (E), Tweety_86 (F1), VRedHorse_80 (F1), Wachhund_81 (F1), Wanda_75 (J), Wee_91 (F1), Whatsapiecost_74 (F1), Yeet_69 (J), Zelink_69 (J), Zerg_82 (F1),

Start 52:

- Found in 6 of 171 (3.5%) of genes in pham
- Manual Annotations of this start: 5 of 158
- Called 100.0% of time when present

- Phage (with cluster) where this start called: Chewbacca_61 (N), Cubone_64 (N), FirstPlacePfu_60 (P1), LilSpotty_76 (singleton), Tortoise12_58 (N), ZenTime222_56 (T),

Start 53:

- Found in 6 of 171 (3.5%) of genes in pham
- Manual Annotations of this start: 1 of 158
- Called 16.7% of time when present
- Phage (with cluster) where this start called: Seanderson_61 (A1),

Start 54:

- Found in 73 of 171 (42.7%) of genes in pham
- No Manual Annotations of this start.
- Called 2.7% of time when present
- Phage (with cluster) where this start called: Daikon_44 (E), Mwanjiwa_84 (F1),

Start 55:

- Found in 66 of 171 (38.6%) of genes in pham
- Manual Annotations of this start: 4 of 158
- Called 9.1% of time when present
- Phage (with cluster) where this start called: Bobby_70 (J), IMpilo_79 (F1), Lucky2013_73 (J), Redno2_72 (J), Shaboozey_66 (J), Zeuska_63 (A1),

Summary by clusters:

There are 13 clusters represented in this pham: F1, F2, P1, E, J, singleton, N, A1, S, T, W, F4, C1,

Info for manual annotations of cluster A1:

- Start number 51 was manually annotated 9 times for cluster A1.
- Start number 53 was manually annotated 1 time for cluster A1.
- Start number 55 was manually annotated 1 time for cluster A1.

Info for manual annotations of cluster C1:

- Start number 51 was manually annotated 4 times for cluster C1.

Info for manual annotations of cluster E:

- Start number 51 was manually annotated 18 times for cluster E.

Info for manual annotations of cluster F1:

- Start number 41 was manually annotated 5 times for cluster F1.
- Start number 43 was manually annotated 1 time for cluster F1.
- Start number 44 was manually annotated 1 time for cluster F1.
- Start number 50 was manually annotated 2 times for cluster F1.
- Start number 51 was manually annotated 63 times for cluster F1.

Info for manual annotations of cluster F2:

- Start number 51 was manually annotated 2 times for cluster F2.

Info for manual annotations of cluster F4:

- Start number 51 was manually annotated 2 times for cluster F4.

Info for manual annotations of cluster J:

- Start number 51 was manually annotated 28 times for cluster J.
- Start number 55 was manually annotated 3 times for cluster J.

Info for manual annotations of cluster N:

- Start number 50 was manually annotated 1 time for cluster N.
- Start number 52 was manually annotated 2 times for cluster N.

Info for manual annotations of cluster P1:

- Start number 52 was manually annotated 1 time for cluster P1.

Info for manual annotations of cluster S:

- Start number 51 was manually annotated 10 times for cluster S.

Info for manual annotations of cluster T:

- Start number 52 was manually annotated 1 time for cluster T.

Info for manual annotations of cluster W:

- Start number 51 was manually annotated 1 time for cluster W.

Gene Information:

Gene: ABCat_42 Start: 36113, Stop: 35817, Start Num: 51

Candidate Starts for ABCat_42:

(Start: 51 @36113 has 138 MA's), (57, 36077), (58, 36059), (66, 36026), (71, 35984), (98, 35837),

Gene: Ashballer_64 Start: 41640, Stop: 41353, Start Num: 51

Candidate Starts for Ashballer_64:

(Start: 43 @41670 has 1 MA's), (Start: 51 @41640 has 138 MA's), (Start: 55 @41616 has 4 MA's), (97, 41376),

Gene: BAKA_82 Start: 52624, Stop: 52340, Start Num: 51

Candidate Starts for BAKA_82:

(Start: 44 @52648 has 1 MA's), (Start: 51 @52624 has 138 MA's), (Start: 55 @52600 has 4 MA's), (68, 52525), (92, 52396), (99, 52360),

Gene: BadAgartude_17 Start: 5514, Stop: 5792, Start Num: 51

Candidate Starts for BadAgartude_17:

(Start: 41 @5475 has 5 MA's), (47, 5493), (Start: 51 @5514 has 138 MA's), (54, 5535), (56, 5547), (57, 5550), (58, 5565), (63, 5574), (92, 5736), (98, 5772),

Gene: Balomoji_42 Start: 35703, Stop: 35428, Start Num: 51

Candidate Starts for Balomoji_42:

(27, 35775), (36, 35751), (37, 35748), (Start: 51 @35703 has 138 MA's), (54, 35682), (56, 35670), (79, 35562), (92, 35484), (98, 35448),

Gene: Batiatus_83 Start: 49708, Stop: 50034, Start Num: 51

Candidate Starts for Batiatus_83:

(22, 49603), (Start: 51 @49708 has 138 MA's), (56, 49741), (57, 49744), (59, 49771), (62, 49777), (79, 49897), (97, 50011),

Gene: Beelzebub_12 Start: 3476, Stop: 3760, Start Num: 51

Candidate Starts for Beelzebub_12:

(Start: 44 @3452 has 1 MA's), (Start: 51 @3476 has 138 MA's), (Start: 55 @3500 has 4 MA's), (68, 3575), (92, 3704), (99, 3740),

Gene: Beem_71 Start: 50213, Stop: 49920, Start Num: 51

Candidate Starts for Beem_71:

(Start: 51 @50213 has 138 MA's), (54, 50192), (56, 50180), (79, 50072), (81, 50024), (85, 50012), (88, 49985), (90, 49982), (98, 49943),

Gene: BilboSwaggins_43 Start: 36121, Stop: 35825, Start Num: 51

Candidate Starts for BilboSwaggins_43:

(Start: 51 @36121 has 138 MA's), (57, 36085), (58, 36067), (66, 36034), (71, 35992), (98, 35845),

Gene: Blexus_76 Start: 48851, Stop: 49147, Start Num: 51

Candidate Starts for Blexus_76:

(Start: 51 @48851 has 138 MA's), (57, 48887), (58, 48905), (66, 48938), (71, 48980), (92, 49091), (98, 49127),

Gene: Blexus_80 Start: 49926, Stop: 50210, Start Num: 51

Candidate Starts for Blexus_80:

(Start: 51 @49926 has 138 MA's), (Start: 55 @49950 has 4 MA's), (56, 49959), (74, 50058), (79, 50073), (97, 50187),

Gene: Bobby_70 Start: 49641, Stop: 49345, Start Num: 55

Candidate Starts for Bobby_70:

(Start: 44 @49689 has 1 MA's), (Start: 51 @49665 has 138 MA's), (Start: 55 @49641 has 4 MA's), (68, 49566), (92, 49437), (99, 49401),

Gene: Bruns_60 Start: 39755, Stop: 39507, Start Num: 51

Candidate Starts for Bruns_60:

(24, 39851), (29, 39827), (40, 39797), (Start: 51 @39755 has 138 MA's), (Start: 53 @39743 has 1 MA's), (97, 39530),

Gene: Budgie_47 Start: 35211, Stop: 34930, Start Num: 51

Candidate Starts for Budgie_47:

(Start: 51 @35211 has 138 MA's), (Start: 55 @35187 has 4 MA's), (56, 35178), (62, 35145), (64, 35133), (65, 35130), (79, 35067), (97, 34953),

Gene: BuzzLyseyear_92 Start: 52666, Stop: 52950, Start Num: 51

Candidate Starts for BuzzLyseyear_92:

(Start: 51 @52666 has 138 MA's), (Start: 55 @52690 has 4 MA's), (56, 52699), (74, 52798), (79, 52813), (97, 52927),

Gene: ByChance_73 Start: 44779, Stop: 45045, Start Num: 50

Candidate Starts for ByChance_73:

(Start: 50 @44779 has 3 MA's), (54, 44806), (57, 44821), (79, 44911), (92, 44989), (98, 45025),

Gene: Byougenkin_82 Start: 47350, Stop: 47634, Start Num: 51

Candidate Starts for Byougenkin_82:

(Start: 51 @47350 has 138 MA's), (Start: 55 @47374 has 4 MA's), (56, 47383), (74, 47482), (79, 47497), (97, 47611),

Gene: Cali_17 Start: 6490, Stop: 6768, Start Num: 51

Candidate Starts for Cali_17:

(Start: 41 @6451 has 5 MA's), (47, 6469), (Start: 51 @6490 has 138 MA's), (54, 6511), (56, 6523), (57, 6526), (58, 6541), (63, 6550), (92, 6712), (98, 6748),

Gene: Che9d_94 Start: 49583, Stop: 49876, Start Num: 51

Candidate Starts for Che9d_94:

(45, 49556), (Start: 51 @49583 has 138 MA's), (54, 49604), (57, 49619), (79, 49745), (97, 49853),

Gene: Chewbacca_61 Start: 37859, Stop: 38119, Start Num: 52

Candidate Starts for Chewbacca_61:

(2, 37556), (3, 37577), (6, 37631), (18, 37733), (46, 37829), (Start: 52 @37859 has 5 MA's), (57, 37892), (82, 38033), (86, 38045), (92, 38060), (96, 38084), (98, 38096), (100, 38102),

Gene: Clarkson_10 Start: 3252, Stop: 3536, Start Num: 51

Candidate Starts for Clarkson_10:

(Start: 44 @3228 has 1 MA's), (Start: 51 @3252 has 138 MA's), (Start: 55 @3276 has 4 MA's), (68, 3351), (92, 3480), (99, 3516),

Gene: Corazon_9 Start: 3205, Stop: 3489, Start Num: 51

Candidate Starts for Corazon_9:

(Start: 44 @3181 has 1 MA's), (Start: 51 @3205 has 138 MA's), (Start: 55 @3229 has 4 MA's), (68, 3304), (92, 3433), (99, 3469),

Gene: Cornucopia_81 Start: 47550, Stop: 47819, Start Num: 51

Candidate Starts for Cornucopia_81:

(Start: 51 @47550 has 138 MA's), (54, 47571), (75, 47670), (77, 47676), (97, 47796),

Gene: Cornucopia_85 Start: 48642, Stop: 48905, Start Num: 51

Candidate Starts for Cornucopia_85:

(Start: 51 @48642 has 138 MA's), (Start: 55 @48666 has 4 MA's), (56, 48675), (79, 48789), (89, 48864),

Gene: CrystalP_44 Start: 36121, Stop: 35825, Start Num: 51

Candidate Starts for CrystalP_44:

(Start: 51 @36121 has 138 MA's), (57, 36085), (58, 36067), (66, 36034), (71, 35992), (98, 35845),

Gene: Cubone_64 Start: 39109, Stop: 39372, Start Num: 52

Candidate Starts for Cubone_64:

(1, 38800), (4, 38848), (5, 38860), (18, 38983), (46, 39079), (Start: 52 @39109 has 5 MA's), (Start: 55 @39130 has 4 MA's), (97, 39349),

Gene: Daikon_44 Start: 35703, Stop: 35449, Start Num: 54

Candidate Starts for Daikon_44:

(27, 35796), (36, 35772), (37, 35769), (Start: 51 @35724 has 138 MA's), (54, 35703), (56, 35691), (79, 35583), (92, 35505), (98, 35469),

Gene: Dallas_70 Start: 49134, Stop: 48841, Start Num: 51

Candidate Starts for Dallas_70:

(Start: 51 @49134 has 138 MA's), (54, 49113), (56, 49101), (79, 48993), (81, 48945), (85, 48933), (88, 48906), (90, 48903), (98, 48864),

Gene: DeadP_86 Start: 49174, Stop: 49458, Start Num: 51

Candidate Starts for DeadP_86:

(Start: 51 @49174 has 138 MA's), (Start: 55 @49198 has 4 MA's), (56, 49207), (74, 49306), (79, 49321), (97, 49435),

Gene: DmpstrDiver_71 Start: 49561, Stop: 49268, Start Num: 51

Candidate Starts for DmpstrDiver_71:

(Start: 51 @49561 has 138 MA's), (54, 49540), (56, 49528), (79, 49420), (81, 49372), (85, 49360), (88, 49333), (90, 49330), (98, 49291),

Gene: Duke13_80 Start: 51836, Stop: 51552, Start Num: 51

Candidate Starts for Duke13_80:

(Start: 44 @51860 has 1 MA's), (Start: 51 @51836 has 138 MA's), (Start: 55 @51812 has 4 MA's), (68, 51737), (92, 51608), (99, 51572),

Gene: Eish_88 Start: 51057, Stop: 51341, Start Num: 51

Candidate Starts for Eish_88:

(Start: 51 @51057 has 138 MA's), (Start: 55 @51081 has 4 MA's), (56, 51090), (74, 51189), (79, 51204), (97, 51318),

Gene: Ejimix_71 Start: 50999, Stop: 50706, Start Num: 51

Candidate Starts for Ejimix_71:

(Start: 51 @50999 has 138 MA's), (54, 50978), (56, 50966), (79, 50858), (81, 50810), (85, 50798), (88, 50771), (90, 50768), (98, 50729),

Gene: Emma_86 Start: 48537, Stop: 48812, Start Num: 51

Candidate Starts for Emma_86:

(15, 48399), (20, 48423), (26, 48447), (39, 48492), (48, 48519), (49, 48522), (Start: 51 @48537 has 138 MA's), (54, 48558), (56, 48570), (59, 48600), (62, 48606), (78, 48720), (79, 48726), (91, 48801),

Gene: EnzoK_61 Start: 38364, Stop: 38077, Start Num: 51

Candidate Starts for EnzoK_61:

(10, 38565), (33, 38421), (35, 38418), (Start: 51 @38364 has 138 MA's), (54, 38343), (56, 38331), (79, 38223), (98, 38100),

Gene: Eradicator_72 Start: 46896, Stop: 47174, Start Num: 51

Candidate Starts for Eradicator_72:

(Start: 41 @46857 has 5 MA's), (47, 46875), (Start: 51 @46896 has 138 MA's), (54, 46917), (56, 46929), (57, 46932), (58, 46947), (63, 46956), (92, 47118), (98, 47154),

Gene: Fancypants_89 Start: 51307, Stop: 51630, Start Num: 51

Candidate Starts for Fancypants_89:

(16, 51169), (Start: 51 @51307 has 138 MA's), (54, 51328), (57, 51343), (67, 51412), (72, 51469), (76, 51484), (79, 51493), (80, 51499), (97, 51607),

Gene: FeliMaine_10 Start: 3253, Stop: 3537, Start Num: 51

Candidate Starts for FeliMaine_10:

(Start: 44 @3229 has 1 MA's), (Start: 51 @3253 has 138 MA's), (Start: 55 @3277 has 4 MA's), (68, 3352), (92, 3481), (99, 3517),

Gene: FirstPlacePfu_60 Start: 37764, Stop: 38024, Start Num: 52

Candidate Starts for FirstPlacePfu_60:

(22, 37662), (25, 37671), (Start: 52 @37764 has 5 MA's), (57, 37797), (82, 37938), (86, 37950), (92, 37965), (96, 37989), (98, 38001), (100, 38007),

Gene: Florinda_94 Start: 51591, Stop: 51875, Start Num: 51

Candidate Starts for Florinda_94:

(Start: 51 @51591 has 138 MA's), (Start: 55 @51615 has 4 MA's), (56, 51624), (74, 51723), (79, 51738), (97, 51852),

Gene: Flypotenuse_38 Start: 34455, Stop: 34180, Start Num: 51

Candidate Starts for Flypotenuse_38:

(27, 34527), (36, 34503), (37, 34500), (Start: 51 @34455 has 138 MA's), (54, 34434), (56, 34422), (79, 34314), (92, 34236), (98, 34200),

Gene: Forsytheast_60 Start: 39923, Stop: 39675, Start Num: 51

Candidate Starts for Forsytheast_60:

(24, 40019), (29, 39995), (40, 39965), (Start: 51 @39923 has 138 MA's), (Start: 53 @39911 has 1 MA's), (97, 39698),

Gene: Galactic_82 Start: 48872, Stop: 49156, Start Num: 51

Candidate Starts for Galactic_82:

(Start: 51 @48872 has 138 MA's), (Start: 55 @48899 has 4 MA's), (56, 48908), (62, 48941), (64, 48953), (65, 48956), (74, 49004), (79, 49019), (97, 49133),

Gene: Gator_41 Start: 35594, Stop: 35319, Start Num: 51

Candidate Starts for Gator_41:

(27, 35666), (36, 35642), (37, 35639), (Start: 51 @35594 has 138 MA's), (54, 35573), (56, 35561), (79, 35453), (92, 35375), (98, 35339),

Gene: Girafales_91 Start: 51196, Stop: 51480, Start Num: 51

Candidate Starts for Girafales_91:

(Start: 51 @51196 has 138 MA's), (Start: 55 @51220 has 4 MA's), (56, 51229), (74, 51328), (79, 51343), (97, 51457),

Gene: Glexan_41 Start: 35582, Stop: 35307, Start Num: 51

Candidate Starts for Glexan_41:

(27, 35654), (36, 35630), (37, 35627), (Start: 51 @35582 has 138 MA's), (54, 35561), (56, 35549), (79, 35441), (92, 35363), (98, 35327),

Gene: Guppsters_76 Start: 46731, Stop: 47015, Start Num: 51

Candidate Starts for Guppsters_76:

(Start: 44 @46707 has 1 MA's), (Start: 51 @46731 has 138 MA's), (Start: 55 @46755 has 4 MA's), (68, 46830), (92, 46959), (99, 46995),

Gene: Hades_81 Start: 47173, Stop: 47484, Start Num: 41

Candidate Starts for Hades_81:

(31, 47146), (Start: 41 @47173 has 5 MA's), (54, 47236), (77, 47341), (97, 47461),

Gene: Halley_73 Start: 50213, Stop: 49920, Start Num: 51

Candidate Starts for Halley_73:

(Start: 51 @50213 has 138 MA's), (54, 50192), (56, 50180), (79, 50072), (81, 50024), (85, 50012), (88, 49985), (90, 49982), (98, 49943),

Gene: Harella_43 Start: 36098, Stop: 35823, Start Num: 51

Candidate Starts for Harella_43:

(27, 36170), (36, 36146), (37, 36143), (Start: 51 @36098 has 138 MA's), (54, 36077), (56, 36065), (79, 35957), (92, 35879), (98, 35843),

Gene: Hlubikazi_81 Start: 47588, Stop: 47899, Start Num: 41

Candidate Starts for Hlubikazi_81:

(31, 47561), (Start: 41 @47588 has 5 MA's), (54, 47651), (77, 47756), (97, 47876),

Gene: HokkenD_64 Start: 48482, Stop: 48189, Start Num: 51

Candidate Starts for HokkenD_64:

(Start: 51 @48482 has 138 MA's), (54, 48461), (56, 48449), (79, 48341), (81, 48293), (85, 48281), (88, 48254), (90, 48251), (98, 48212),

Gene: Hughesyang_70 Start: 50142, Stop: 49849, Start Num: 51

Candidate Starts for Hughesyang_70:

(Start: 51 @50142 has 138 MA's), (54, 50121), (56, 50109), (79, 50001), (81, 49953), (85, 49941), (88, 49914), (90, 49911), (98, 49872),

Gene: Huphlebuff_10 Start: 2982, Stop: 3266, Start Num: 51

Candidate Starts for Huphlebuff_10:

(Start: 44 @2958 has 1 MA's), (Start: 51 @2982 has 138 MA's), (Start: 55 @3006 has 4 MA's), (68, 3081), (92, 3210), (99, 3246),

Gene: IHOP_42 Start: 35685, Stop: 35389, Start Num: 51

Candidate Starts for IHOP_42:

(Start: 51 @35685 has 138 MA's), (57, 35649), (58, 35631), (66, 35598), (71, 35556), (98, 35409),

Gene: IMpilo_79 Start: 47727, Stop: 47987, Start Num: 55

Candidate Starts for IMpilo_79:

(26, 47616), (Start: 51 @47703 has 138 MA's), (Start: 55 @47727 has 4 MA's), (56, 47736), (74, 47835), (79, 47850), (97, 47964),

Gene: Ibhubesi_80 Start: 47022, Stop: 47336, Start Num: 43

Candidate Starts for Ibhubesi_80:

(Start: 43 @47022 has 1 MA's), (Start: 44 @47028 has 1 MA's), (Start: 51 @47052 has 138 MA's), (Start: 55 @47076 has 4 MA's), (88, 47274), (92, 47280), (99, 47316),

Gene: Inca_41 Start: 34210, Stop: 33914, Start Num: 51

Candidate Starts for Inca_41:

(Start: 51 @34210 has 138 MA's), (57, 34174), (58, 34156), (66, 34123), (71, 34081), (98, 33934),

Gene: JC27_64 Start: 41329, Stop: 41042, Start Num: 51

Candidate Starts for JC27_64:

(Start: 43 @41359 has 1 MA's), (Start: 51 @41329 has 138 MA's), (Start: 55 @41305 has 4 MA's), (97, 41065),

Gene: Jinglebell_88 Start: 49768, Stop: 50088, Start Num: 51

Candidate Starts for Jinglebell_88:

(Start: 44 @49744 has 1 MA's), (Start: 51 @49768 has 138 MA's), (Start: 55 @49792 has 4 MA's), (68, 49867), (92, 49996), (99, 50032),

Gene: Jinglebell_90 Start: 50298, Stop: 50591, Start Num: 51

Candidate Starts for Jinglebell_90:

(Start: 51 @50298 has 138 MA's), (54, 50319), (57, 50334), (79, 50460), (97, 50568),

Gene: Job42_84 Start: 52418, Stop: 52702, Start Num: 51

Candidate Starts for Job42_84:

(Start: 51 @52418 has 138 MA's), (Start: 55 @52442 has 4 MA's), (56, 52451), (74, 52550), (79, 52565), (97, 52679),

Gene: JoieB_10 Start: 3201, Stop: 3485, Start Num: 51

Candidate Starts for JoieB_10:

(Start: 44 @3177 has 1 MA's), (Start: 51 @3201 has 138 MA's), (Start: 55 @3225 has 4 MA's), (68, 3300), (92, 3429), (99, 3465),

Gene: Jorgensen_63 Start: 40720, Stop: 40448, Start Num: 51

Candidate Starts for Jorgensen_63:

(Start: 51 @40720 has 138 MA's), (54, 40699), (56, 40687), (79, 40579), (98, 40471),

Gene: Juice456_78 Start: 48213, Stop: 48485, Start Num: 51

Candidate Starts for Juice456_78:

(Start: 51 @48213 has 138 MA's), (54, 48234), (56, 48246), (79, 48354), (98, 48462),

Gene: JuicyJay_70 Start: 51347, Stop: 51054, Start Num: 51

Candidate Starts for JuicyJay_70:

(Start: 51 @51347 has 138 MA's), (54, 51326), (56, 51314), (79, 51206), (81, 51158), (85, 51146), (88, 51119), (90, 51116), (98, 51077),

Gene: Juniper1_80 Start: 48708, Stop: 48983, Start Num: 51

Candidate Starts for Juniper1_80:

(21, 48603), (28, 48633), (Start: 51 @48708 has 138 MA's), (54, 48729), (57, 48744), (79, 48834), (93, 48927), (95, 48945),

Gene: Kalah2_66 Start: 49506, Stop: 49213, Start Num: 51

Candidate Starts for Kalah2_66:

(Start: 51 @49506 has 138 MA's), (54, 49485), (56, 49473), (79, 49365), (81, 49317), (85, 49305), (88, 49278), (90, 49275), (98, 49236),

Gene: Karhdo_80 Start: 47607, Stop: 47906, Start Num: 51

Candidate Starts for Karhdo_80:

(Start: 51 @47607 has 138 MA's), (54, 47628), (57, 47643), (79, 47769), (97, 47883),

Gene: KashFlow_68 Start: 45901, Stop: 45623, Start Num: 51

Candidate Starts for KashFlow_68:

(Start: 41 @45940 has 5 MA's), (47, 45922), (Start: 51 @45901 has 138 MA's), (54, 45880), (56, 45868), (57, 45865), (58, 45850), (63, 45841), (92, 45679), (98, 45643),

Gene: Kersh_83 Start: 50793, Stop: 51092, Start Num: 51

Candidate Starts for Kersh_83:

(Start: 51 @50793 has 138 MA's), (54, 50814), (57, 50829), (79, 50955), (97, 51069),

Gene: Kimberlium_83 Start: 48559, Stop: 48834, Start Num: 51

Candidate Starts for Kimberlium_83:

(Start: 51 @48559 has 138 MA's), (54, 48580), (56, 48592), (59, 48622), (62, 48628), (78, 48742), (79, 48748), (91, 48823),

Gene: Klein_71 Start: 49529, Stop: 49236, Start Num: 51

Candidate Starts for Klein_71:

(Start: 51 @49529 has 138 MA's), (54, 49508), (56, 49496), (79, 49388), (81, 49340), (85, 49328), (88, 49301), (90, 49298), (98, 49259),

Gene: Koella_76 Start: 46177, Stop: 46458, Start Num: 51

Candidate Starts for Koella_76:

(Start: 51 @46177 has 138 MA's), (Start: 55 @46198 has 4 MA's), (60, 46231), (92, 46402), (99, 46438),

Gene: Krakatau_77 Start: 45727, Stop: 46011, Start Num: 51

Candidate Starts for Krakatau_77:

(Start: 51 @45727 has 138 MA's), (Start: 55 @45751 has 4 MA's), (56, 45760), (74, 45859), (79, 45874), (97, 45988),

Gene: Leozinho_79 Start: 46485, Stop: 46781, Start Num: 51

Candidate Starts for Leozinho_79:

(Start: 51 @46485 has 138 MA's), (57, 46521), (58, 46539), (66, 46572), (71, 46614), (92, 46725), (98, 46761),

Gene: LilSpotty_76 Start: 44396, Stop: 44653, Start Num: 52

Candidate Starts for LilSpotty_76:

(13, 44225), (18, 44270), (46, 44366), (Start: 52 @44396 has 5 MA's), (57, 44429), (82, 44570), (83, 44573), (84, 44576), (88, 44600), (92, 44606), (96, 44630),

Gene: Lilbit_10 Start: 3253, Stop: 3537, Start Num: 51

Candidate Starts for Lilbit_10:

(Start: 44 @3229 has 1 MA's), (Start: 51 @3253 has 138 MA's), (Start: 55 @3277 has 4 MA's), (68, 3352), (92, 3481), (99, 3517),

Gene: LittleE_74 Start: 49484, Stop: 49203, Start Num: 51

Candidate Starts for LittleE_74:

(11, 49685), (12, 49673), (17, 49613), (19, 49601), (32, 49547), (Start: 51 @49484 has 138 MA's), (Start: 55 @49460 has 4 MA's), (56, 49451), (62, 49418), (64, 49406), (65, 49403), (74, 49355), (79, 49340), (97, 49226),

Gene: LittleLaf_9 Start: 2982, Stop: 3266, Start Num: 51

Candidate Starts for LittleLaf_9:

(Start: 44 @2958 has 1 MA's), (Start: 51 @2982 has 138 MA's), (Start: 55 @3006 has 4 MA's), (68, 3081), (92, 3210), (99, 3246),

Gene: Llama_88 Start: 49624, Stop: 49944, Start Num: 51

Candidate Starts for Llama_88:

(Start: 44 @49600 has 1 MA's), (Start: 51 @49624 has 138 MA's), (Start: 55 @49648 has 4 MA's), (68, 49723), (92, 49852), (99, 49888),

Gene: Llama_90 Start: 50154, Stop: 50447, Start Num: 51

Candidate Starts for Llama_90:

(Start: 51 @50154 has 138 MA's), (54, 50175), (57, 50190), (79, 50316), (97, 50424),

Gene: Llij_80 Start: 47508, Stop: 47834, Start Num: 51

Candidate Starts for Llij_80:

(Start: 51 @47508 has 138 MA's), (56, 47541), (57, 47544), (59, 47571), (62, 47577), (79, 47697), (97, 47811),

Gene: Lucky2013_69 Start: 45952, Stop: 45659, Start Num: 51
Candidate Starts for Lucky2013_69:
(Start: 51 @45952 has 138 MA's), (54, 45931), (56, 45919), (79, 45811), (81, 45763), (85, 45751), (88, 45724), (90, 45721), (98, 45682),

Gene: Lucky2013_73 Start: 47341, Stop: 47081, Start Num: 55
Candidate Starts for Lucky2013_73:
(Start: 51 @47365 has 138 MA's), (Start: 55 @47341 has 4 MA's), (68, 47266), (92, 47137), (99, 47101),

Gene: MadMen_79 Start: 47451, Stop: 47750, Start Num: 51
Candidate Starts for MadMen_79:
(Start: 51 @47451 has 138 MA's), (54, 47472), (57, 47487), (79, 47613), (97, 47727),

Gene: Mandlovu_81 Start: 47530, Stop: 47841, Start Num: 41
Candidate Starts for Mandlovu_81:
(31, 47503), (Start: 41 @47530 has 5 MA's), (54, 47593), (77, 47698), (97, 47818),

Gene: Marleymoo_65 Start: 48325, Stop: 48032, Start Num: 51
Candidate Starts for Marleymoo_65:
(Start: 51 @48325 has 138 MA's), (54, 48304), (56, 48292), (79, 48184), (81, 48136), (85, 48124), (88, 48097), (90, 48094), (98, 48055),

Gene: Marshmallow_43 Start: 36119, Stop: 35823, Start Num: 51
Candidate Starts for Marshmallow_43:
(Start: 51 @36119 has 138 MA's), (57, 36083), (58, 36065), (66, 36032), (71, 35990), (98, 35843),

Gene: Marvin_8 Start: 2964, Stop: 3248, Start Num: 51
Candidate Starts for Marvin_8:
(Start: 44 @2940 has 1 MA's), (Start: 51 @2964 has 138 MA's), (Start: 55 @2988 has 4 MA's), (68, 3063), (92, 3192), (99, 3228),

Gene: Medindi_89 Start: 51260, Stop: 51544, Start Num: 51
Candidate Starts for Medindi_89:
(Start: 51 @51260 has 138 MA's), (Start: 55 @51284 has 4 MA's), (56, 51293), (74, 51392), (79, 51407), (97, 51521),

Gene: Minerva_79 Start: 52268, Stop: 51984, Start Num: 51
Candidate Starts for Minerva_79:
(Start: 44 @52292 has 1 MA's), (Start: 51 @52268 has 138 MA's), (Start: 55 @52244 has 4 MA's), (68, 52169), (92, 52040), (99, 52004),

Gene: Minerva_77 Start: 51629, Stop: 51336, Start Num: 51
Candidate Starts for Minerva_77:
(Start: 51 @51629 has 138 MA's), (54, 51608), (56, 51596), (79, 51488), (81, 51440), (85, 51428), (88, 51401), (90, 51398), (98, 51359),

Gene: Modragons_86 Start: 49612, Stop: 49932, Start Num: 51
Candidate Starts for Modragons_86:
(Start: 44 @49588 has 1 MA's), (Start: 51 @49612 has 138 MA's), (Start: 55 @49636 has 4 MA's), (68, 49711), (92, 49840), (99, 49876),

Gene: Modragons_88 Start: 50142, Stop: 50435, Start Num: 51

Candidate Starts for Modragons_88:

(Start: 51 @50142 has 138 MA's), (54, 50163), (57, 50178), (79, 50304), (97, 50412),

Gene: MooMoo_80 Start: 48107, Stop: 48433, Start Num: 51

Candidate Starts for MooMoo_80:

(Start: 51 @48107 has 138 MA's), (56, 48140), (57, 48143), (59, 48170), (62, 48176), (79, 48296), (97, 48410),

Gene: Moose_60 Start: 39923, Stop: 39675, Start Num: 51

Candidate Starts for Moose_60:

(24, 40019), (29, 39995), (40, 39965), (Start: 51 @39923 has 138 MA's), (Start: 53 @39911 has 1 MA's), (97, 39698),

Gene: MulchExplorer_81 Start: 48230, Stop: 48505, Start Num: 51

Candidate Starts for MulchExplorer_81:

(Start: 51 @48230 has 138 MA's), (54, 48251), (56, 48263), (59, 48293), (62, 48299), (78, 48413), (79, 48419), (91, 48494),

Gene: Mwanjiwa_84 Start: 49794, Stop: 50060, Start Num: 54

Candidate Starts for Mwanjiwa_84:

(Start: 51 @49773 has 138 MA's), (54, 49794), (57, 49809), (61, 49833), (79, 49926), (92, 50004), (98, 50040),

Gene: Myrale_44 Start: 35984, Stop: 35688, Start Num: 51

Candidate Starts for Myrale_44:

(Start: 51 @35984 has 138 MA's), (57, 35948), (58, 35930), (66, 35897), (71, 35855), (98, 35708),

Gene: Nekros_70 Start: 48461, Stop: 48180, Start Num: 51

Candidate Starts for Nekros_70:

(25, 48554), (30, 48530), (Start: 51 @48461 has 138 MA's), (Start: 55 @48437 has 4 MA's), (56, 48428), (62, 48395), (64, 48383), (65, 48380), (74, 48332), (79, 48317), (97, 48203),

Gene: Nichirin_83 Start: 49518, Stop: 49811, Start Num: 51

Candidate Starts for Nichirin_83:

(Start: 51 @49518 has 138 MA's), (54, 49539), (57, 49554), (79, 49680), (97, 49788),

Gene: Nichirin_81 Start: 48986, Stop: 49306, Start Num: 51

Candidate Starts for Nichirin_81:

(Start: 44 @48962 has 1 MA's), (Start: 51 @48986 has 138 MA's), (Start: 55 @49010 has 4 MA's), (68, 49085), (92, 49214), (99, 49250),

Gene: NihilNomen_72 Start: 50300, Stop: 50007, Start Num: 51

Candidate Starts for NihilNomen_72:

(Start: 51 @50300 has 138 MA's), (54, 50279), (56, 50267), (79, 50159), (81, 50111), (85, 50099), (88, 50072), (90, 50069), (98, 50030),

Gene: NormanBulbieJr_82 Start: 50191, Stop: 50472, Start Num: 51

Candidate Starts for NormanBulbieJr_82:

(Start: 51 @50191 has 138 MA's), (Start: 55 @50212 has 4 MA's), (60, 50245), (92, 50416), (99, 50452),

Gene: Ochi17_87 Start: 49219, Stop: 49539, Start Num: 51

Candidate Starts for Ochi17_87:

(Start: 44 @49195 has 1 MA's), (Start: 51 @49219 has 138 MA's), (Start: 55 @49243 has 4 MA's), (68, 49318), (92, 49447), (99, 49483),

Gene: Ochi17_89 Start: 49749, Stop: 50042, Start Num: 51

Candidate Starts for Ochi17_89:

(Start: 51 @49749 has 138 MA's), (54, 49770), (57, 49785), (79, 49911), (97, 50019),

Gene: Odette_70 Start: 49343, Stop: 49050, Start Num: 51

Candidate Starts for Odette_70:

(Start: 51 @49343 has 138 MA's), (54, 49322), (56, 49310), (79, 49202), (81, 49154), (85, 49142), (88, 49115), (90, 49112), (98, 49073),

Gene: OfUltron_91 Start: 50298, Stop: 50591, Start Num: 51

Candidate Starts for OfUltron_91:

(Start: 51 @50298 has 138 MA's), (54, 50319), (57, 50334), (79, 50460), (97, 50568),

Gene: OfUltron_89 Start: 49768, Stop: 50088, Start Num: 51

Candidate Starts for OfUltron_89:

(Start: 44 @49744 has 1 MA's), (Start: 51 @49768 has 138 MA's), (Start: 55 @49792 has 4 MA's), (68, 49867), (92, 49996), (99, 50032),

Gene: Omega_77 Start: 51219, Stop: 50938, Start Num: 51

Candidate Starts for Omega_77:

(Start: 51 @51219 has 138 MA's), (Start: 55 @51195 has 4 MA's), (56, 51186), (62, 51153), (64, 51141), (65, 51138), (79, 51075), (97, 50961),

Gene: Pacc40_73 Start: 48569, Stop: 48838, Start Num: 51

Candidate Starts for Pacc40_73:

(Start: 51 @48569 has 138 MA's), (54, 48590), (75, 48689), (77, 48695), (97, 48815),

Gene: Phaja_42 Start: 35684, Stop: 35388, Start Num: 51

Candidate Starts for Phaja_42:

(Start: 51 @35684 has 138 MA's), (57, 35648), (58, 35630), (66, 35597), (71, 35555), (98, 35408),

Gene: Phalconet_82 Start: 49094, Stop: 49378, Start Num: 51

Candidate Starts for Phalconet_82:

(Start: 51 @49094 has 138 MA's), (Start: 55 @49118 has 4 MA's), (56, 49127), (74, 49226), (79, 49241), (97, 49355),

Gene: PhesterPotato_89 Start: 50262, Stop: 50546, Start Num: 51

Candidate Starts for PhesterPotato_89:

(Start: 51 @50262 has 138 MA's), (Start: 55 @50286 has 4 MA's), (56, 50295), (74, 50394), (79, 50409), (97, 50523),

Gene: Pippy_76 Start: 47591, Stop: 47887, Start Num: 51

Candidate Starts for Pippy_76:

(Start: 51 @47591 has 138 MA's), (57, 47627), (58, 47645), (66, 47678), (71, 47720), (92, 47831), (98, 47867),

Gene: PopTart_77 Start: 47157, Stop: 47441, Start Num: 51

Candidate Starts for PopTart_77:

(Start: 51 @47157 has 138 MA's), (Start: 55 @47181 has 4 MA's), (56, 47190), (74, 47289), (79, 47304), (97, 47418),

Gene: Pound_75 Start: 52901, Stop: 52608, Start Num: 51

Candidate Starts for Pound_75:

(Start: 51 @52901 has 138 MA's), (54, 52880), (56, 52868), (79, 52760), (81, 52712), (85, 52700), (88, 52673), (90, 52670), (98, 52631),

Gene: Pound_77 Start: 53540, Stop: 53256, Start Num: 51

Candidate Starts for Pound_77:

(Start: 44 @53564 has 1 MA's), (Start: 51 @53540 has 138 MA's), (Start: 55 @53516 has 4 MA's), (68, 53441), (92, 53312), (99, 53276),

Gene: Pringar_9 Start: 2807, Stop: 3091, Start Num: 51

Candidate Starts for Pringar_9:

(Start: 44 @2783 has 1 MA's), (Start: 51 @2807 has 138 MA's), (Start: 55 @2831 has 4 MA's), (68, 2906), (92, 3035), (99, 3071),

Gene: Priscilla_84 Start: 50289, Stop: 50570, Start Num: 51

Candidate Starts for Priscilla_84:

(Start: 51 @50289 has 138 MA's), (Start: 55 @50310 has 4 MA's), (60, 50343), (92, 50514), (99, 50550),

Gene: QuickMath_80 Start: 48565, Stop: 48837, Start Num: 51

Candidate Starts for QuickMath_80:

(Start: 51 @48565 has 138 MA's), (54, 48586), (56, 48598), (79, 48706), (98, 48814),

Gene: Quico_91 Start: 51411, Stop: 51695, Start Num: 51

Candidate Starts for Quico_91:

(Start: 51 @51411 has 138 MA's), (Start: 55 @51435 has 4 MA's), (56, 51444), (74, 51543), (79, 51558), (97, 51672),

Gene: Rabinovish_14 Start: 5789, Stop: 6034, Start Num: 51

Candidate Starts for Rabinovish_14:

(14, 5627), (Start: 51 @5789 has 138 MA's), (Start: 55 @5813 has 4 MA's), (56, 5822), (79, 5936), (87, 5996),

Gene: Radiance_80 Start: 49352, Stop: 49621, Start Num: 51

Candidate Starts for Radiance_80:

(42, 49322), (47, 49328), (Start: 51 @49352 has 138 MA's), (54, 49373), (75, 49472), (77, 49478), (97, 49598),

Gene: Redno2_68 Start: 47096, Stop: 46803, Start Num: 51

Candidate Starts for Redno2_68:

(Start: 51 @47096 has 138 MA's), (54, 47075), (56, 47063), (79, 46955), (81, 46907), (85, 46895), (88, 46868), (90, 46865), (98, 46826),

Gene: Redno2_72 Start: 48485, Stop: 48225, Start Num: 55

Candidate Starts for Redno2_72:

(Start: 51 @48509 has 138 MA's), (Start: 55 @48485 has 4 MA's), (68, 48410), (92, 48281), (99, 48245),

Gene: Renaud18_93 Start: 50655, Stop: 50924, Start Num: 51

Candidate Starts for Renaud18_93:

(Start: 51 @50655 has 138 MA's), (54, 50676), (57, 50691), (79, 50787), (97, 50901),

Gene: Royals2015_90 Start: 49759, Stop: 50043, Start Num: 51
Candidate Starts for Royals2015_90:
(Start: 51 @49759 has 138 MA's), (Start: 55 @49783 has 4 MA's), (56, 49792), (74, 49891), (79, 49906), (97, 50020),

Gene: Royals2015_86 Start: 48664, Stop: 48936, Start Num: 51
Candidate Starts for Royals2015_86:
(38, 48622), (Start: 44 @48640 has 1 MA's), (Start: 51 @48664 has 138 MA's), (54, 48685), (56, 48697), (79, 48805), (98, 48913),

Gene: Sabbb_83 Start: 46768, Stop: 47067, Start Num: 51
Candidate Starts for Sabbb_83:
(Start: 51 @46768 has 138 MA's), (54, 46789), (57, 46804), (79, 46930), (97, 47044),

Gene: SassyB_77 Start: 47157, Stop: 47441, Start Num: 51
Candidate Starts for SassyB_77:
(Start: 51 @47157 has 138 MA's), (Start: 55 @47181 has 4 MA's), (56, 47190), (74, 47289), (79, 47304), (97, 47418),

Gene: Schatzie_66 Start: 49090, Stop: 48797, Start Num: 51
Candidate Starts for Schatzie_66:
(Start: 51 @49090 has 138 MA's), (54, 49069), (56, 49057), (79, 48949), (81, 48901), (85, 48889), (88, 48862), (90, 48859), (98, 48820),

Gene: Seabastian_91 Start: 50299, Stop: 50592, Start Num: 51
Candidate Starts for Seabastian_91:
(Start: 51 @50299 has 138 MA's), (54, 50320), (57, 50335), (79, 50461), (97, 50569),

Gene: Seabastian_89 Start: 49769, Stop: 50089, Start Num: 51
Candidate Starts for Seabastian_89:
(Start: 44 @49745 has 1 MA's), (Start: 51 @49769 has 138 MA's), (Start: 55 @49793 has 4 MA's), (68, 49868), (92, 49997), (99, 50033),

Gene: Seanderson_61 Start: 42123, Stop: 41887, Start Num: 53
Candidate Starts for Seanderson_61:
(24, 42231), (29, 42207), (40, 42177), (Start: 51 @42135 has 138 MA's), (Start: 53 @42123 has 1 MA's), (97, 41910),

Gene: Shaboozey_66 Start: 44922, Stop: 44668, Start Num: 55
Candidate Starts for Shaboozey_66:
(34, 45003), (Start: 51 @44946 has 138 MA's), (Start: 55 @44922 has 4 MA's), (56, 44913), (62, 44880), (64, 44868), (65, 44865), (74, 44817), (79, 44802), (92, 44724), (98, 44688),

Gene: ShamWow_44 Start: 36121, Stop: 35825, Start Num: 51
Candidate Starts for ShamWow_44:
(Start: 51 @36121 has 138 MA's), (57, 36085), (58, 36067), (66, 36034), (71, 35992), (98, 35845),

Gene: ShowerHandel_82 Start: 48717, Stop: 48983, Start Num: 50
Candidate Starts for ShowerHandel_82:
(Start: 50 @48717 has 3 MA's), (54, 48744), (57, 48759), (79, 48849), (92, 48927), (98, 48963),

Gene: SkiPole_66 Start: 41398, Stop: 41150, Start Num: 51

Candidate Starts for SkiPole_66:

(7, 41611), (8, 41608), (9, 41605), (10, 41602), (24, 41494), (29, 41470), (40, 41440), (Start: 51 @41398 has 138 MA's), (Start: 53 @41386 has 1 MA's), (97, 41173),

Gene: Soul22_84 Start: 47805, Stop: 48131, Start Num: 51

Candidate Starts for Soul22_84:

(Start: 51 @47805 has 138 MA's), (56, 47838), (57, 47841), (59, 47868), (62, 47874), (79, 47994), (97, 48108),

Gene: Spartacus_87 Start: 51565, Stop: 51846, Start Num: 51

Candidate Starts for Spartacus_87:

(Start: 51 @51565 has 138 MA's), (Start: 55 @51586 has 4 MA's), (60, 51619), (92, 51790), (99, 51826),

Gene: Spartacus_90 Start: 52535, Stop: 52846, Start Num: 41

Candidate Starts for Spartacus_90:

(Start: 41 @52535 has 5 MA's), (54, 52598), (77, 52703), (97, 52823),

Gene: Sprinklers_16 Start: 4916, Stop: 5194, Start Num: 51

Candidate Starts for Sprinklers_16:

(Start: 41 @4877 has 5 MA's), (47, 4895), (Start: 51 @4916 has 138 MA's), (54, 4937), (56, 4949), (57, 4952), (58, 4967), (63, 4976), (92, 5138), (98, 5174),

Gene: StellaBean_42 Start: 35445, Stop: 35149, Start Num: 51

Candidate Starts for StellaBean_42:

(Start: 51 @35445 has 138 MA's), (57, 35409), (58, 35391), (66, 35358), (71, 35316), (98, 35169),

Gene: Strokeseat_81 Start: 47587, Stop: 47898, Start Num: 41

Candidate Starts for Strokeseat_81:

(31, 47560), (Start: 41 @47587 has 5 MA's), (54, 47650), (77, 47755), (97, 47875),

Gene: SuperGrey_82 Start: 51027, Stop: 51305, Start Num: 51

Candidate Starts for SuperGrey_82:

(Start: 41 @50988 has 5 MA's), (47, 51006), (Start: 51 @51027 has 138 MA's), (54, 51048), (56, 51060), (57, 51063), (58, 51078), (63, 51087), (92, 51249), (98, 51285),

Gene: Superphikiman_69 Start: 45818, Stop: 45525, Start Num: 51

Candidate Starts for Superphikiman_69:

(Start: 51 @45818 has 138 MA's), (54, 45797), (56, 45785), (79, 45677), (81, 45629), (85, 45617), (88, 45590), (90, 45587), (98, 45548),

Gene: SwissCheese_62 Start: 40423, Stop: 40175, Start Num: 51

Candidate Starts for SwissCheese_62:

(24, 40519), (29, 40495), (40, 40465), (Start: 51 @40423 has 138 MA's), (Start: 53 @40411 has 1 MA's), (97, 40198),

Gene: Taj_92 Start: 52011, Stop: 52295, Start Num: 51

Candidate Starts for Taj_92:

(23, 51912), (Start: 51 @52011 has 138 MA's), (Start: 55 @52035 has 4 MA's), (56, 52044), (74, 52143), (79, 52158), (97, 52272),

Gene: Taptic_70 Start: 50486, Stop: 50746, Start Num: 51

Candidate Starts for Taptic_70:

(Start: 51 @50486 has 138 MA's), (57, 50522), (58, 50540), (66, 50573), (71, 50615),

Gene: Tchotchke_76 Start: 47691, Stop: 47990, Start Num: 47

Candidate Starts for Tchotchke_76:

(Start: 41 @47673 has 5 MA's), (47, 47691), (Start: 51 @47712 has 138 MA's), (54, 47733), (56, 47745), (57, 47748), (58, 47763), (63, 47772), (92, 47934), (98, 47970),

Gene: ThetaBob_85 Start: 48938, Stop: 49243, Start Num: 51

Candidate Starts for ThetaBob_85:

(Start: 51 @48938 has 138 MA's), (56, 48971), (57, 48974), (59, 49001), (62, 49007), (79, 49127), (94, 49202),

Gene: ThreeRngTarjay_69 Start: 50376, Stop: 50083, Start Num: 51

Candidate Starts for ThreeRngTarjay_69:

(Start: 51 @50376 has 138 MA's), (54, 50355), (56, 50343), (79, 50235), (81, 50187), (85, 50175), (88, 50148), (90, 50145), (98, 50106),

Gene: Tortoise12_58 Start: 37074, Stop: 37331, Start Num: 52

Candidate Starts for Tortoise12_58:

(2, 36771), (3, 36792), (6, 36846), (18, 36948), (46, 37044), (Start: 52 @37074 has 5 MA's), (57, 37107), (82, 37248), (83, 37251), (84, 37254), (88, 37278), (92, 37284), (96, 37308),

Gene: Tortoise12_60 Start: 37645, Stop: 37935, Start Num: 50

Candidate Starts for Tortoise12_60:

(Start: 50 @37645 has 3 MA's), (Start: 55 @37675 has 4 MA's), (69, 37753), (70, 37768), (73, 37780), (79, 37798), (85, 37849), (86, 37861), (92, 37876), (96, 37900), (98, 37912), (100, 37918),

Gene: Toto_43 Start: 36121, Stop: 35825, Start Num: 51

Candidate Starts for Toto_43:

(Start: 51 @36121 has 138 MA's), (57, 36085), (58, 36067), (66, 36034), (71, 35992), (98, 35845),

Gene: Traaww1_40 Start: 34923, Stop: 34648, Start Num: 51

Candidate Starts for Traaww1_40:

(27, 34995), (36, 34971), (37, 34968), (Start: 51 @34923 has 138 MA's), (54, 34902), (56, 34890), (79, 34782), (92, 34704), (98, 34668),

Gene: Tuco_45 Start: 36629, Stop: 36333, Start Num: 51

Candidate Starts for Tuco_45:

(Start: 51 @36629 has 138 MA's), (57, 36593), (58, 36575), (66, 36542), (71, 36500), (98, 36353),

Gene: Tweety_86 Start: 51088, Stop: 51372, Start Num: 51

Candidate Starts for Tweety_86:

(Start: 51 @51088 has 138 MA's), (Start: 55 @51112 has 4 MA's), (56, 51121), (74, 51220), (79, 51235), (97, 51349),

Gene: VRedHorse_80 Start: 46368, Stop: 46637, Start Num: 51

Candidate Starts for VRedHorse_80:

(Start: 51 @46368 has 138 MA's), (54, 46389), (75, 46488), (77, 46494), (97, 46614),

Gene: Velveteen_75 Start: 45597, Stop: 45905, Start Num: 44

Candidate Starts for Velveteen_75:

(Start: 44 @45597 has 1 MA's), (Start: 51 @45621 has 138 MA's), (Start: 55 @45645 has 4 MA's), (68, 45720), (92, 45849), (99, 45885),

Gene: Wachhund_81 Start: 46941, Stop: 47240, Start Num: 51

Candidate Starts for Wachhund_81:

(Start: 51 @46941 has 138 MA's), (54, 46962), (57, 46977), (79, 47103), (97, 47217),

Gene: Wanda_75 Start: 49838, Stop: 49545, Start Num: 51

Candidate Starts for Wanda_75:

(Start: 51 @49838 has 138 MA's), (54, 49817), (56, 49805), (79, 49697), (81, 49649), (85, 49637), (88, 49610), (90, 49607), (98, 49568),

Gene: Wee_91 Start: 52087, Stop: 52371, Start Num: 51

Candidate Starts for Wee_91:

(Start: 51 @52087 has 138 MA's), (Start: 55 @52111 has 4 MA's), (56, 52120), (74, 52219), (79, 52234), (97, 52348),

Gene: Whatsapiecost_74 Start: 44329, Stop: 44613, Start Num: 51

Candidate Starts for Whatsapiecost_74:

(Start: 51 @44329 has 138 MA's), (Start: 55 @44353 has 4 MA's), (56, 44362), (79, 44476), (97, 44590),

Gene: Yeet_69 Start: 49362, Stop: 49069, Start Num: 51

Candidate Starts for Yeet_69:

(Start: 51 @49362 has 138 MA's), (54, 49341), (56, 49329), (79, 49221), (81, 49173), (85, 49161), (88, 49134), (90, 49131), (98, 49092),

Gene: Zelink_69 Start: 50689, Stop: 50396, Start Num: 51

Candidate Starts for Zelink_69:

(Start: 51 @50689 has 138 MA's), (54, 50668), (56, 50656), (79, 50548), (81, 50500), (85, 50488), (88, 50461), (90, 50458), (98, 50419),

Gene: ZenTime222_56 Start: 39238, Stop: 39498, Start Num: 52

Candidate Starts for ZenTime222_56:

(2, 38935), (3, 38956), (6, 39010), (18, 39112), (46, 39208), (Start: 52 @39238 has 5 MA's), (57, 39271), (82, 39412), (86, 39424), (92, 39439), (96, 39463), (98, 39475), (100, 39481),

Gene: Zerg_82 Start: 49172, Stop: 49456, Start Num: 51

Candidate Starts for Zerg_82:

(Start: 44 @49148 has 1 MA's), (Start: 51 @49172 has 138 MA's), (Start: 55 @49196 has 4 MA's), (68, 49271), (92, 49400), (99, 49436),

Gene: Zeuska_63 Start: 42656, Stop: 42396, Start Num: 55

Candidate Starts for Zeuska_63:

(Start: 51 @42680 has 138 MA's), (Start: 55 @42656 has 4 MA's), (56, 42647), (79, 42533), (97, 42419),