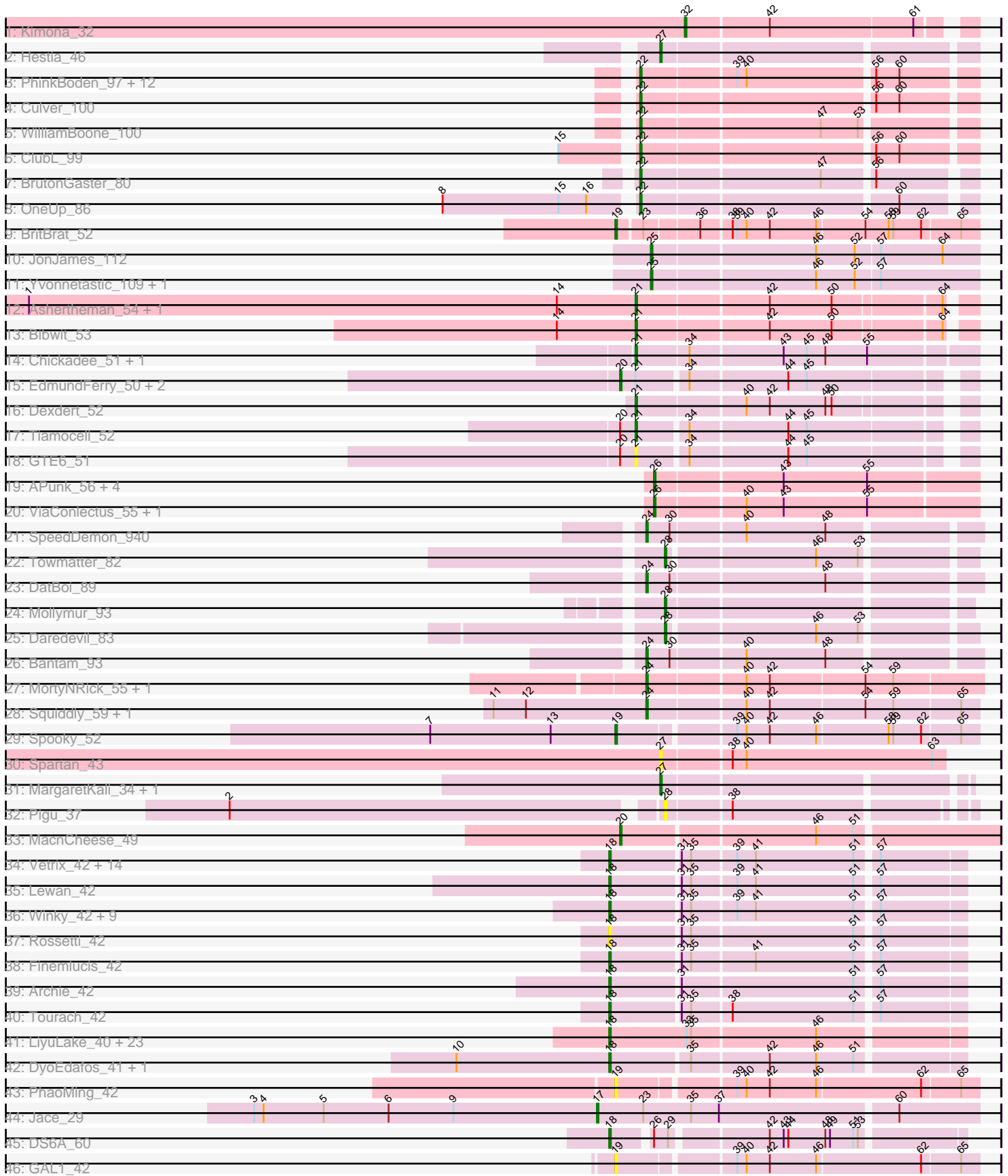


Pham 311385



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 311385 Report

This analysis was run 06/27/26 on database version 652.

Pham number 311385 has 118 members, 13 are drafts.

Phages represented in each track:

- Track 1 : Kimona_32
- Track 2 : Hestia_46
- Track 3 : PhinkBoden_97, Norvs_100, Dusty_96, Cucurbita_99, Toniann_100, Abscondus_97, Smoothie_99, Geeche_97, Engineer_99, Lozinak_98, Miskis_92, Bachita_100, Aphelion_99
- Track 4 : Culver_100
- Track 5 : WilliamBoone_100
- Track 6 : ClubL_99
- Track 7 : BrutonGaster_80
- Track 8 : OneUp_86
- Track 9 : BritBrat_52
- Track 10 : JonJames_112
- Track 11 : Yvonnetastic_109, Cardigan_113
- Track 12 : Ashertheman_54, Gaea_53
- Track 13 : Bibwit_53
- Track 14 : Chickadee_51, Kwekel_51
- Track 15 : EdmundFerry_50, Twonlo_49, RoadKill_49
- Track 16 : Dextert_52
- Track 17 : Tiamoceli_52
- Track 18 : GTE6_51
- Track 19 : APunk_56, Sampson_55, Abblin_55, Scioto_56, Natkenzie_55
- Track 20 : ViaConlectus_55, Tardus_57
- Track 21 : SpeedDemon_940
- Track 22 : Towmatter_82
- Track 23 : DatBoi_89
- Track 24 : Mollymur_93
- Track 25 : Daredevil_83
- Track 26 : Bantam_93
- Track 27 : MortyNRick_55, BearBQ_57
- Track 28 : Squiddly_59, Malisha_63
- Track 29 : Spooky_52
- Track 30 : Spartan_43
- Track 31 : MargaretKali_34, Kumotta_34
- Track 32 : Pigu_37
- Track 33 : MacnCheese_49
- Track 34 : Vatrix_42, Nicholasp3_42, GuuelaD_42, Kahlid_42, Crossroads_42, Loadrie_42, Gabriela_42, Rumpelstiltskin_42, Gardann_42, Wilder_42,

- MkaliMitinis3_42, OverPar_42, Underpass_42, Wigglewiggle_42, Zakai_42
- Track 35 : Lewan_42
 - Track 36 : Winky_42, Itos_41, BobsGarage_42, Netyap_42, Breezona_42, BigCheese_42, Faith1_42, Miley16_42, LilDestine_42, DrSeegs_42
 - Track 37 : Rossetti_42
 - Track 38 : Finemlucis_42
 - Track 39 : Archie_42
 - Track 40 : Tourach_42
 - Track 41 : LiyuLake_40, Lolly9_40, MsGreen_40, Jobypre_40, Ellson_40, Kingsolomon_40, MiniLon_40, Krypton555_40, Whirlwind_41, Lumos_40, Samty_40, Clautastrophe_40, Bellis_40, Red305_40, Snenia_40, Finnry_40, TriFive_40, MiniMac_40, DuncansLeg_40, KirDoubleO7_38, BourbonZero_39, Jubie_40, Nicholas_40, Moostard_40
 - Track 42 : DyoEdafos_41, Kropertea_40
 - Track 43 : PhaoMing_42
 - Track 44 : Jace_29
 - Track 45 : DS6A_60
 - Track 46 : GAL1_42

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

The start number called the most often in the published annotations is 18, it was called in 51 of the 105 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Archie_42, Bellis_40, BigCheese_42, BobsGarage_42, BourbonZero_39, Breezona_42, Clautastrophe_40, Crossroads_42, DS6A_60, DrSeegs_42, DuncansLeg_40, DyoEdafos_41, Ellson_40, Faith1_42, Finemlucis_42, Finnry_40, Gabriela_42, Gardann_42, GuuelaD_42, Itos_41, Jobypre_40, Jubie_40, Kahlid_42, Kingsolomon_40, KirDoubleO7_38, Kropertea_40, Krypton555_40, Lewan_42, LilDestine_42, LiyuLake_40, Loadrie_42, Lolly9_40, Lumos_40, Miley16_42, MiniLon_40, MiniMac_40, MkaliMitinis3_42, Moostard_40, MsGreen_40, Netyap_42, Nicholas_40, Nicholasp3_42, OverPar_42, Red305_40, Rossetti_42, Rumpelstiltskin_42, Samty_40, Snenia_40, Tourach_42, TriFive_40, Underpass_42, Vetrix_42, Whirlwind_41, Wigglewiggle_42, Wilder_42, Winky_42, Zakai_42,

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

-

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

- APunk_56, Abblin_55, Abscondus_97, Aphelion_99, Ashertheman_54, Bachita_100, Bantam_93, BearBQ_57, Bibwit_53, BritBrat_52, BrutonGaster_80, Cardigan_113, Chickadee_51, ClubL_99, Cucurbita_99, Culver_100, Daredevil_83, DatBoi_89, Dextert_52, Dusty_96, EdmundFerry_50, Engineer_99, GAL1_42, GTE6_51, Gaea_53, Geeche_97, Hestia_46, Jace_29, JonJames_112, Kimona_32, Kumotta_34, Kwekel_51, Lozinak_98, MacnCheese_49, Malisha_63, MargaretKali_34, Miskis_92, Mollymur_93, MortyNRick_55, Natkenzie_55, Norvs_100, OneUp_86, PhaoMing_42, PhinkBoden_97, Pigu_37, RoadKill_49, Sampson_55, Scioto_56, Smoothie_99, Spartan_43, SpeedDemon_940, Spooky_52, Squiddly_59, Tardus_57, Tiamoceli_52, Toniann_100, Towmatter_82, Twonlo_49,

ViaConlectus_55, WilliamBoone_100, Yvonnestic_109,

Summary by start number:

Start 17:

- Found in 1 of 118 (0.8%) of genes in pham
- Manual Annotations of this start: 1 of 105
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Jace_29 (singleton),

Start 18:

- Found in 57 of 118 (48.3%) of genes in pham
- Manual Annotations of this start: 51 of 105
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Archie_42 (L2), Bellis_40 (L3), BigCheese_42 (L2), BobsGarage_42 (L2), BourbonZero_39 (L3), Breezona_42 (L2), Clautastrophe_40 (L3), Crossroads_42 (L2), DS6A_60 (singleton), DrSeegs_42 (L2), DuncansLeg_40 (L3), DyoEdafos_41 (L4), Ellson_40 (L3), Faith1_42 (L2), Finemlucis_42 (L2), Finnry_40 (L3), Gabriela_42 (L2), Gardann_42 (L2), GuuelaD_42 (L2), Itos_41 (L2), Jobypre_40 (L3), Jubie_40 (L3), Kahlid_42 (L2), Kingsolomon_40 (L3), KirDoubleO7_38 (L3), Kropertea_40 (L4), Krypton555_40 (L3), Lewan_42 (L2), LilDestine_42 (L2), LiyuLake_40 (L3), Loadrie_42 (L2), Lolly9_40 (L3), Lumos_40 (L3), Miley16_42 (L2), MiniLon_40 (L3), MiniMac_40 (L3), MkaliMitinis3_42 (L2), Moostard_40 (L3), MsGreen_40 (L3), Netyap_42 (L2), Nicholas_40 (L3), Nicholasp3_42 (L2), OverPar_42 (L2), Red305_40 (L3), Rossetti_42 (L2), Rumpelstiltskin_42 (L2), Samty_40 (L3), Snenia_40 (L3), Tourach_42 (L2), TriFive_40 (L3), Underpass_42 (L2), Vetric_42 (L2), Whirlwind_41 (L3), Wigglewiggie_42 (L2), Wilder_42 (L2), Winky_42 (L2), Zakai_42 (L2),

Start 19:

- Found in 4 of 118 (3.4%) of genes in pham
- Manual Annotations of this start: 2 of 105
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BritBrat_52 (CY2), GAL1_42 (singleton), PhaoMing_42 (UNK), Spooky_52 (DN2),

Start 20:

- Found in 6 of 118 (5.1%) of genes in pham
- Manual Annotations of this start: 4 of 105
- Called 66.7% of time when present
- Phage (with cluster) where this start called: EdmundFerry_50 (DE3), MacnCheese_49 (K3), RoadKill_49 (DE3), Twonlo_49 (DE3),

Start 21:

- Found in 11 of 118 (9.3%) of genes in pham
- Manual Annotations of this start: 7 of 105
- Called 72.7% of time when present
- Phage (with cluster) where this start called: Ashertheman_54 (DE1), Bibwit_53 (DE1), Chickadee_51 (DE3), Dextert_52 (DE3), GTE6_51 (DE3), Gaea_53 (DE1), Kwekel_51 (DE3), Tiamoceli_52 (DE3),

Start 22:

- Found in 18 of 118 (15.3%) of genes in pham

- Manual Annotations of this start: 17 of 105
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Abscondus_97 (CQ1), Aphelion_99 (CQ1), Bachita_100 (CQ1), BrutonGaster_80 (CQ2), ClubL_99 (CQ1), Cucurbita_99 (CQ1), Culver_100 (CQ1), Dusty_96 (CQ1), Engineer_99 (CQ1), Geeche_97 (CQ1), Lozinak_98 (CQ1), Miskis_92 (CQ1), Norvs_100 (CQ1), OneUp_86 (CQ2), PhinkBoden_97 (CQ1), Smoothie_99 (CQ1), Toniann_100 (CQ1), WilliamBoone_100 (CQ1),

Start 24:

- Found in 7 of 118 (5.9%) of genes in pham
- Manual Annotations of this start: 7 of 105
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bantam_93 (DL), BearBQ_57 (DN), DatBoi_89 (DL), Malisha_63 (DN), MortyNRick_55 (DN), SpeedDemon_940 (DL), Squiddly_59 (DN2),

Start 25:

- Found in 3 of 118 (2.5%) of genes in pham
- Manual Annotations of this start: 2 of 105
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Cardigan_113 (DD), JonJames_112 (DD), Yvonnetastic_109 (DD),

Start 26:

- Found in 8 of 118 (6.8%) of genes in pham
- Manual Annotations of this start: 7 of 105
- Called 87.5% of time when present
- Phage (with cluster) where this start called: APunk_56 (DE4), Abblin_55 (DE4), Natkenzie_55 (DE4), Sampson_55 (DE4), Scioto_56 (DE4), Tardus_57 (DE4), ViaConlectus_55 (DE4),

Start 27:

- Found in 4 of 118 (3.4%) of genes in pham
- Manual Annotations of this start: 3 of 105
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Hestia_46 (AY), Kumotta_34 (FB), MargaretKali_34 (FB), Spartan_43 (ES),

Start 28:

- Found in 4 of 118 (3.4%) of genes in pham
- Manual Annotations of this start: 3 of 105
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Daredevil_83 (DL), Mollymur_93 (DL), Pigu_37 (FB), Towmatter_82 (DL),

Start 32:

- Found in 1 of 118 (0.8%) of genes in pham
- Manual Annotations of this start: 1 of 105
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kimona_32 (A19),

Summary by clusters:

There are 20 clusters represented in this pham: DN, CY2, DL, DE1, DD, DE3, DE4, singleton, FB, K3, L4, L2, L3, A19, DN2, AY, CQ2, CQ1, UNK, ES,

Info for manual annotations of cluster A19:

- Start number 32 was manually annotated 1 time for cluster A19.

Info for manual annotations of cluster AY:

- Start number 27 was manually annotated 1 time for cluster AY.

Info for manual annotations of cluster CQ1:

- Start number 22 was manually annotated 15 times for cluster CQ1.

Info for manual annotations of cluster CQ2:

- Start number 22 was manually annotated 2 times for cluster CQ2.

Info for manual annotations of cluster CY2:

- Start number 19 was manually annotated 1 time for cluster CY2.

Info for manual annotations of cluster DD:

- Start number 25 was manually annotated 2 times for cluster DD.

Info for manual annotations of cluster DE1:

- Start number 21 was manually annotated 3 times for cluster DE1.

Info for manual annotations of cluster DE3:

- Start number 20 was manually annotated 3 times for cluster DE3.
- Start number 21 was manually annotated 4 times for cluster DE3.

Info for manual annotations of cluster DE4:

- Start number 26 was manually annotated 7 times for cluster DE4.

Info for manual annotations of cluster DL:

- Start number 24 was manually annotated 3 times for cluster DL.
- Start number 28 was manually annotated 3 times for cluster DL.

Info for manual annotations of cluster DN:

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

Info for manual annotations of cluster DN2:

- Start number 19 was manually annotated 1 time for cluster DN2.
- Start number 24 was manually annotated 1 time for cluster DN2.

Info for manual annotations of cluster FB:

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

Info for manual annotations of cluster K3:

- Start number 20 was manually annotated 1 time for cluster K3.

Info for manual annotations of cluster L2:

- Start number 18 was manually annotated 29 times for cluster L2.

Info for manual annotations of cluster L3:

- Start number 18 was manually annotated 19 times for cluster L3.

Info for manual annotations of cluster L4:

- Start number 18 was manually annotated 2 times for cluster L4.

Gene Information:

Gene: APunk_56 Start: 45016, Stop: 45216, Start Num: 26

Candidate Starts for APunk_56:

(Start: 26 @45016 has 7 MA's), (43, 45094), (55, 45148),

Gene: Abblin_55 Start: 45502, Stop: 45702, Start Num: 26

Candidate Starts for Abblin_55:

(Start: 26 @45502 has 7 MA's), (43, 45580), (55, 45634),

Gene: Abscondus_97 Start: 58989, Stop: 59189, Start Num: 22

Candidate Starts for Abscondus_97:

(Start: 22 @58989 has 17 MA's), (39, 59046), (40, 59052), (56, 59130), (60, 59145),

Gene: Aphelion_99 Start: 60542, Stop: 60742, Start Num: 22

Candidate Starts for Aphelion_99:

(Start: 22 @60542 has 17 MA's), (39, 60599), (40, 60605), (56, 60683), (60, 60698),

Gene: Archie_42 Start: 34898, Stop: 35113, Start Num: 18

Candidate Starts for Archie_42:

(Start: 18 @34898 has 51 MA's), (31, 34940), (51, 35048), (57, 35060),

Gene: Ashertheman_54 Start: 44467, Stop: 44664, Start Num: 21

Candidate Starts for Ashertheman_54:

(1, 44074), (14, 44416), (Start: 21 @44467 has 7 MA's), (42, 44548), (50, 44587), (64, 44650),

Gene: Bachita_100 Start: 60200, Stop: 60400, Start Num: 22

Candidate Starts for Bachita_100:

(Start: 22 @60200 has 17 MA's), (39, 60257), (40, 60263), (56, 60341), (60, 60356),

Gene: Bantam_93 Start: 62206, Stop: 62006, Start Num: 24

Candidate Starts for Bantam_93:

(Start: 24 @62206 has 7 MA's), (30, 62191), (40, 62146), (48, 62095),

Gene: BearBQ_57 Start: 39707, Stop: 39916, Start Num: 24

Candidate Starts for BearBQ_57:

(Start: 24 @39707 has 7 MA's), (40, 39767), (42, 39782), (54, 39842), (59, 39860),

Gene: Bellis_40 Start: 34953, Stop: 35168, Start Num: 18

Candidate Starts for Bellis_40:

(Start: 18 @34953 has 51 MA's), (33, 34998), (35, 35001), (46, 35079),

Gene: Bibwit_53 Start: 43981, Stop: 44178, Start Num: 21

Candidate Starts for Bibwit_53:

(14, 43930), (Start: 21 @43981 has 7 MA's), (42, 44062), (50, 44101), (64, 44164),

Gene: BigCheese_42 Start: 34694, Stop: 34909, Start Num: 18

Candidate Starts for BigCheese_42:

(Start: 18 @34694 has 51 MA's), (31, 34736), (35, 34742), (39, 34769), (41, 34781), (51, 34844), (57, 34856),

Gene: BobsGarage_42 Start: 34694, Stop: 34909, Start Num: 18

Candidate Starts for BobsGarage_42:

(Start: 18 @34694 has 51 MA's), (31, 34736), (35, 34742), (39, 34769), (41, 34781), (51, 34844), (57, 34856),

Gene: BourbonZero_39 Start: 34932, Stop: 35150, Start Num: 18

Candidate Starts for BourbonZero_39:

(Start: 18 @34932 has 51 MA's), (33, 34980), (35, 34983), (46, 35061),

Gene: Breezona_42 Start: 34694, Stop: 34909, Start Num: 18

Candidate Starts for Breezona_42:

(Start: 18 @34694 has 51 MA's), (31, 34736), (35, 34742), (39, 34769), (41, 34781), (51, 34844), (57, 34856),

Gene: BritBrat_52 Start: 37915, Stop: 38136, Start Num: 19

Candidate Starts for BritBrat_52:

(Start: 19 @37915 has 2 MA's), (23, 37930), (36, 37963), (38, 37981), (39, 37984), (40, 37990), (42, 38005), (46, 38035), (54, 38065), (58, 38080), (59, 38083), (62, 38101), (65, 38125),

Gene: BrutonGaster_80 Start: 54552, Stop: 54749, Start Num: 22

Candidate Starts for BrutonGaster_80:

(Start: 22 @54552 has 17 MA's), (47, 54663), (56, 54693),

Gene: Cardigan_113 Start: 64662, Stop: 64865, Start Num: 25

Candidate Starts for Cardigan_113:

(Start: 25 @64662 has 2 MA's), (46, 64764), (52, 64788), (57, 64803),

Gene: Chickadee_51 Start: 41286, Stop: 41495, Start Num: 21

Candidate Starts for Chickadee_51:

(Start: 21 @41286 has 7 MA's), (34, 41319), (43, 41376), (45, 41391), (48, 41403), (55, 41430),

Gene: Clautastrophe_40 Start: 34951, Stop: 35166, Start Num: 18

Candidate Starts for Clautastrophe_40:

(Start: 18 @34951 has 51 MA's), (33, 34996), (35, 34999), (46, 35077),

Gene: ClubL_99 Start: 59132, Stop: 59332, Start Num: 22

Candidate Starts for ClubL_99:

(15, 59090), (Start: 22 @59132 has 17 MA's), (56, 59273), (60, 59288),

Gene: Crossroads_42 Start: 34696, Stop: 34911, Start Num: 18

Candidate Starts for Crossroads_42:

(Start: 18 @34696 has 51 MA's), (31, 34738), (35, 34744), (39, 34771), (41, 34783), (51, 34846), (57, 34858),

Gene: Cucurbita_99 Start: 60707, Stop: 60907, Start Num: 22

Candidate Starts for Cucurbita_99:

(Start: 22 @60707 has 17 MA's), (39, 60764), (40, 60770), (56, 60848), (60, 60863),

Gene: Culver_100 Start: 59032, Stop: 59232, Start Num: 22

Candidate Starts for Culver_100:

(Start: 22 @59032 has 17 MA's), (56, 59173), (60, 59188),

Gene: DS6A_60 Start: 41278, Stop: 41484, Start Num: 18

Candidate Starts for DS6A_60:

(Start: 18 @41278 has 51 MA's), (Start: 26 @41299 has 7 MA's), (29, 41308), (42, 41365), (43, 41374), (44, 41377), (48, 41401), (49, 41404), (51, 41419), (53, 41422),

Gene: Daredevil_83 Start: 57872, Stop: 57690, Start Num: 28

Candidate Starts for Daredevil_83:

(Start: 28 @57872 has 3 MA's), (46, 57782), (53, 57755),

Gene: DatBoi_89 Start: 61354, Stop: 61154, Start Num: 24

Candidate Starts for DatBoi_89:

(Start: 24 @61354 has 7 MA's), (30, 61339), (48, 61243),

Gene: Dextert_52 Start: 41572, Stop: 41766, Start Num: 21

Candidate Starts for Dextert_52:

(Start: 21 @41572 has 7 MA's), (40, 41638), (42, 41653), (48, 41689), (50, 41692),

Gene: DrSeegs_42 Start: 34694, Stop: 34909, Start Num: 18

Candidate Starts for DrSeegs_42:

(Start: 18 @34694 has 51 MA's), (31, 34736), (35, 34742), (39, 34769), (41, 34781), (51, 34844), (57, 34856),

Gene: DuncansLeg_40 Start: 34969, Stop: 35187, Start Num: 18

Candidate Starts for DuncansLeg_40:

(Start: 18 @34969 has 51 MA's), (33, 35017), (35, 35020), (46, 35098),

Gene: Dusty_96 Start: 59048, Stop: 59248, Start Num: 22

Candidate Starts for Dusty_96:

(Start: 22 @59048 has 17 MA's), (39, 59105), (40, 59111), (56, 59189), (60, 59204),

Gene: DyoEdafos_41 Start: 33704, Stop: 33919, Start Num: 18

Candidate Starts for DyoEdafos_41:

(10, 33605), (Start: 18 @33704 has 51 MA's), (35, 33752), (42, 33800), (46, 33830), (51, 33854),

Gene: EdmundFerry_50 Start: 41346, Stop: 41549, Start Num: 20

Candidate Starts for EdmundFerry_50:

(Start: 20 @41346 has 4 MA's), (Start: 21 @41355 has 7 MA's), (34, 41385), (44, 41445), (45, 41457),

Gene: Ellson_40 Start: 34945, Stop: 35163, Start Num: 18

Candidate Starts for Ellson_40:

(Start: 18 @34945 has 51 MA's), (33, 34993), (35, 34996), (46, 35074),

Gene: Engineer_99 Start: 60173, Stop: 60373, Start Num: 22

Candidate Starts for Engineer_99:

(Start: 22 @60173 has 17 MA's), (39, 60230), (40, 60236), (56, 60314), (60, 60329),

Gene: Faith1_42 Start: 34694, Stop: 34909, Start Num: 18

Candidate Starts for Faith1_42:

(Start: 18 @34694 has 51 MA's), (31, 34736), (35, 34742), (39, 34769), (41, 34781), (51, 34844), (57, 34856),

Gene: Finemlucis_42 Start: 34970, Stop: 35185, Start Num: 18

Candidate Starts for Finemlucis_42:

(Start: 18 @34970 has 51 MA's), (31, 35012), (35, 35018), (41, 35057), (51, 35120), (57, 35132),

Gene: Finnry_40 Start: 34954, Stop: 35169, Start Num: 18

Candidate Starts for Finnry_40:

(Start: 18 @34954 has 51 MA's), (33, 34999), (35, 35002), (46, 35080),

Gene: GAL1_42 Start: 33753, Stop: 33974, Start Num: 19

Candidate Starts for GAL1_42:

(Start: 19 @33753 has 2 MA's), (39, 33822), (40, 33828), (42, 33843), (46, 33873), (62, 33939), (65, 33963),

Gene: GTE6_51 Start: 41823, Stop: 42017, Start Num: 21

Candidate Starts for GTE6_51:

(Start: 20 @41814 has 4 MA's), (Start: 21 @41823 has 7 MA's), (34, 41853), (44, 41913), (45, 41925),

Gene: Gabriela_42 Start: 34956, Stop: 35171, Start Num: 18

Candidate Starts for Gabriela_42:

(Start: 18 @34956 has 51 MA's), (31, 34998), (35, 35004), (39, 35031), (41, 35043), (51, 35106), (57, 35118),

Gene: Gaea_53 Start: 43767, Stop: 43964, Start Num: 21

Candidate Starts for Gaea_53:

(1, 43374), (14, 43716), (Start: 21 @43767 has 7 MA's), (42, 43848), (50, 43887), (64, 43950),

Gene: Gardann_42 Start: 34695, Stop: 34910, Start Num: 18

Candidate Starts for Gardann_42:

(Start: 18 @34695 has 51 MA's), (31, 34737), (35, 34743), (39, 34770), (41, 34782), (51, 34845), (57, 34857),

Gene: Geeche_97 Start: 59271, Stop: 59471, Start Num: 22

Candidate Starts for Geeche_97:

(Start: 22 @59271 has 17 MA's), (39, 59328), (40, 59334), (56, 59412), (60, 59427),

Gene: GuuelaD_42 Start: 34733, Stop: 34948, Start Num: 18

Candidate Starts for GuuelaD_42:

(Start: 18 @34733 has 51 MA's), (31, 34775), (35, 34781), (39, 34808), (41, 34820), (51, 34883), (57, 34895),

Gene: Hestia_46 Start: 29789, Stop: 29977, Start Num: 27

Candidate Starts for Hestia_46:

(Start: 27 @29789 has 3 MA's),

Gene: Itos_41 Start: 33600, Stop: 33815, Start Num: 18

Candidate Starts for Itos_41:

(Start: 18 @33600 has 51 MA's), (31, 33642), (35, 33648), (39, 33675), (41, 33687), (51, 33750), (57, 33762),

Gene: Jace_29 Start: 24871, Stop: 25110, Start Num: 17
Candidate Starts for Jace_29:
(3, 24649), (4, 24655), (5, 24694), (6, 24736), (9, 24778), (Start: 17 @24871 has 1 MA's), (23, 24901),
(35, 24931), (37, 24949), (60, 25060),

Gene: Jobypre_40 Start: 34951, Stop: 35166, Start Num: 18
Candidate Starts for Jobypre_40:
(Start: 18 @34951 has 51 MA's), (33, 34996), (35, 34999), (46, 35077),

Gene: JonJames_112 Start: 65173, Stop: 65376, Start Num: 25
Candidate Starts for JonJames_112:
(Start: 25 @65173 has 2 MA's), (46, 65275), (52, 65299), (57, 65314), (64, 65353),

Gene: Jubie_40 Start: 34952, Stop: 35167, Start Num: 18
Candidate Starts for Jubie_40:
(Start: 18 @34952 has 51 MA's), (33, 34997), (35, 35000), (46, 35078),

Gene: Kahlid_42 Start: 34700, Stop: 34915, Start Num: 18
Candidate Starts for Kahlid_42:
(Start: 18 @34700 has 51 MA's), (31, 34742), (35, 34748), (39, 34775), (41, 34787), (51, 34850), (57,
34862),

Gene: Kimona_32 Start: 25489, Stop: 25322, Start Num: 32
Candidate Starts for Kimona_32:
(Start: 32 @25489 has 1 MA's), (42, 25438), (61, 25348),

Gene: Kingsolomon_40 Start: 34951, Stop: 35166, Start Num: 18
Candidate Starts for Kingsolomon_40:
(Start: 18 @34951 has 51 MA's), (33, 34996), (35, 34999), (46, 35077),

Gene: KirDoubleO7_38 Start: 34973, Stop: 35191, Start Num: 18
Candidate Starts for KirDoubleO7_38:
(Start: 18 @34973 has 51 MA's), (33, 35021), (35, 35024), (46, 35102),

Gene: Kropertea_40 Start: 33527, Stop: 33742, Start Num: 18
Candidate Starts for Kropertea_40:
(10, 33428), (Start: 18 @33527 has 51 MA's), (35, 33575), (42, 33623), (46, 33653), (51, 33677),

Gene: Krypton555_40 Start: 34868, Stop: 35083, Start Num: 18
Candidate Starts for Krypton555_40:
(Start: 18 @34868 has 51 MA's), (33, 34913), (35, 34916), (46, 34994),

Gene: Kumotta_34 Start: 26417, Stop: 26599, Start Num: 27
Candidate Starts for Kumotta_34:
(Start: 27 @26417 has 3 MA's),

Gene: Kwekel_51 Start: 41247, Stop: 41456, Start Num: 21
Candidate Starts for Kwekel_51:
(Start: 21 @41247 has 7 MA's), (34, 41280), (43, 41337), (45, 41352), (48, 41364), (55, 41391),

Gene: Lewan_42 Start: 34687, Stop: 34902, Start Num: 18
Candidate Starts for Lewan_42:

(Start: 18 @34687 has 51 MA's), (31, 34729), (35, 34735), (39, 34762), (41, 34774), (51, 34837), (57, 34849),

Gene: LilDestine_42 Start: 34692, Stop: 34907, Start Num: 18

Candidate Starts for LilDestine_42:

(Start: 18 @34692 has 51 MA's), (31, 34734), (35, 34740), (39, 34767), (41, 34779), (51, 34842), (57, 34854),

Gene: LiyuLake_40 Start: 34935, Stop: 35153, Start Num: 18

Candidate Starts for LiyuLake_40:

(Start: 18 @34935 has 51 MA's), (33, 34983), (35, 34986), (46, 35064),

Gene: Loadrie_42 Start: 34726, Stop: 34941, Start Num: 18

Candidate Starts for Loadrie_42:

(Start: 18 @34726 has 51 MA's), (31, 34768), (35, 34774), (39, 34801), (41, 34813), (51, 34876), (57, 34888),

Gene: Lolly9_40 Start: 34759, Stop: 34977, Start Num: 18

Candidate Starts for Lolly9_40:

(Start: 18 @34759 has 51 MA's), (33, 34807), (35, 34810), (46, 34888),

Gene: Lozinak_98 Start: 60011, Stop: 60211, Start Num: 22

Candidate Starts for Lozinak_98:

(Start: 22 @60011 has 17 MA's), (39, 60068), (40, 60074), (56, 60152), (60, 60167),

Gene: Lumos_40 Start: 34948, Stop: 35163, Start Num: 18

Candidate Starts for Lumos_40:

(Start: 18 @34948 has 51 MA's), (33, 34993), (35, 34996), (46, 35074),

Gene: MacnCheese_49 Start: 37043, Stop: 37276, Start Num: 20

Candidate Starts for MacnCheese_49:

(Start: 20 @37043 has 4 MA's), (46, 37163), (51, 37187),

Gene: Malisha_63 Start: 40533, Stop: 40739, Start Num: 24

Candidate Starts for Malisha_63:

(11, 40434), (12, 40455), (Start: 24 @40533 has 7 MA's), (40, 40593), (42, 40608), (54, 40668), (59, 40686), (65, 40728),

Gene: MargaretKali_34 Start: 26052, Stop: 26234, Start Num: 27

Candidate Starts for MargaretKali_34:

(Start: 27 @26052 has 3 MA's),

Gene: Miley16_42 Start: 34694, Stop: 34909, Start Num: 18

Candidate Starts for Miley16_42:

(Start: 18 @34694 has 51 MA's), (31, 34736), (35, 34742), (39, 34769), (41, 34781), (51, 34844), (57, 34856),

Gene: MiniLon_40 Start: 34760, Stop: 34978, Start Num: 18

Candidate Starts for MiniLon_40:

(Start: 18 @34760 has 51 MA's), (33, 34808), (35, 34811), (46, 34889),

Gene: MiniMac_40 Start: 34757, Stop: 34975, Start Num: 18

Candidate Starts for MiniMac_40:

(Start: 18 @34757 has 51 MA's), (33, 34805), (35, 34808), (46, 34886),

Gene: Miskis_92 Start: 58711, Stop: 58911, Start Num: 22

Candidate Starts for Miskis_92:

(Start: 22 @58711 has 17 MA's), (39, 58768), (40, 58774), (56, 58852), (60, 58867),

Gene: MkaliMitinis3_42 Start: 34696, Stop: 34911, Start Num: 18

Candidate Starts for MkaliMitinis3_42:

(Start: 18 @34696 has 51 MA's), (31, 34738), (35, 34744), (39, 34771), (41, 34783), (51, 34846), (57, 34858),

Gene: Mollymur_93 Start: 63027, Stop: 62845, Start Num: 28

Candidate Starts for Mollymur_93:

(Start: 28 @63027 has 3 MA's),

Gene: Moostard_40 Start: 34953, Stop: 35168, Start Num: 18

Candidate Starts for Moostard_40:

(Start: 18 @34953 has 51 MA's), (33, 34998), (35, 35001), (46, 35079),

Gene: MortyNRick_55 Start: 39746, Stop: 39955, Start Num: 24

Candidate Starts for MortyNRick_55:

(Start: 24 @39746 has 7 MA's), (40, 39806), (42, 39821), (54, 39881), (59, 39899),

Gene: MsGreen_40 Start: 34951, Stop: 35166, Start Num: 18

Candidate Starts for MsGreen_40:

(Start: 18 @34951 has 51 MA's), (33, 34996), (35, 34999), (46, 35077),

Gene: Natkenzie_55 Start: 45502, Stop: 45702, Start Num: 26

Candidate Starts for Natkenzie_55:

(Start: 26 @45502 has 7 MA's), (43, 45580), (55, 45634),

Gene: Netyap_42 Start: 34694, Stop: 34909, Start Num: 18

Candidate Starts for Netyap_42:

(Start: 18 @34694 has 51 MA's), (31, 34736), (35, 34742), (39, 34769), (41, 34781), (51, 34844), (57, 34856),

Gene: Nicholas_40 Start: 34951, Stop: 35166, Start Num: 18

Candidate Starts for Nicholas_40:

(Start: 18 @34951 has 51 MA's), (33, 34996), (35, 34999), (46, 35077),

Gene: Nicholasp3_42 Start: 34695, Stop: 34910, Start Num: 18

Candidate Starts for Nicholasp3_42:

(Start: 18 @34695 has 51 MA's), (31, 34737), (35, 34743), (39, 34770), (41, 34782), (51, 34845), (57, 34857),

Gene: Norvs_100 Start: 60040, Stop: 60240, Start Num: 22

Candidate Starts for Norvs_100:

(Start: 22 @60040 has 17 MA's), (39, 60097), (40, 60103), (56, 60181), (60, 60196),

Gene: OneUp_86 Start: 56418, Stop: 56615, Start Num: 22

Candidate Starts for OneUp_86:

(8, 56301), (15, 56376), (16, 56394), (Start: 22 @56418 has 17 MA's), (60, 56574),

Gene: OverPar_42 Start: 34726, Stop: 34941, Start Num: 18
Candidate Starts for OverPar_42:
(Start: 18 @34726 has 51 MA's), (31, 34768), (35, 34774), (39, 34801), (41, 34813), (51, 34876), (57, 34888),

Gene: PhaoMing_42 Start: 34692, Stop: 34913, Start Num: 19
Candidate Starts for PhaoMing_42:
(Start: 19 @34692 has 2 MA's), (39, 34761), (40, 34767), (42, 34782), (46, 34812), (62, 34878), (65, 34902),

Gene: PhinkBoden_97 Start: 59801, Stop: 60001, Start Num: 22
Candidate Starts for PhinkBoden_97:
(Start: 22 @59801 has 17 MA's), (39, 59858), (40, 59864), (56, 59942), (60, 59957),

Gene: Pigu_37 Start: 25613, Stop: 25792, Start Num: 28
Candidate Starts for Pigu_37:
(2, 25346), (Start: 28 @25613 has 3 MA's), (38, 25652),

Gene: Red305_40 Start: 34951, Stop: 35166, Start Num: 18
Candidate Starts for Red305_40:
(Start: 18 @34951 has 51 MA's), (33, 34996), (35, 34999), (46, 35077),

Gene: RoadKill_49 Start: 40844, Stop: 41047, Start Num: 20
Candidate Starts for RoadKill_49:
(Start: 20 @40844 has 4 MA's), (Start: 21 @40853 has 7 MA's), (34, 40883), (44, 40943), (45, 40955),

Gene: Rossetti_42 Start: 34961, Stop: 35176, Start Num: 18
Candidate Starts for Rossetti_42:
(Start: 18 @34961 has 51 MA's), (31, 35003), (35, 35009), (51, 35111), (57, 35123),

Gene: Rumpelstiltskin_42 Start: 34961, Stop: 35173, Start Num: 18
Candidate Starts for Rumpelstiltskin_42:
(Start: 18 @34961 has 51 MA's), (31, 35003), (35, 35009), (39, 35036), (41, 35048), (51, 35111), (57, 35123),

Gene: Sampson_55 Start: 45447, Stop: 45647, Start Num: 26
Candidate Starts for Sampson_55:
(Start: 26 @45447 has 7 MA's), (43, 45525), (55, 45579),

Gene: Samty_40 Start: 34952, Stop: 35167, Start Num: 18
Candidate Starts for Samty_40:
(Start: 18 @34952 has 51 MA's), (33, 34997), (35, 35000), (46, 35078),

Gene: Scioto_56 Start: 45503, Stop: 45703, Start Num: 26
Candidate Starts for Scioto_56:
(Start: 26 @45503 has 7 MA's), (43, 45581), (55, 45635),

Gene: Smoothie_99 Start: 60011, Stop: 60211, Start Num: 22
Candidate Starts for Smoothie_99:
(Start: 22 @60011 has 17 MA's), (39, 60068), (40, 60074), (56, 60152), (60, 60167),

Gene: Snenia_40 Start: 34952, Stop: 35167, Start Num: 18
Candidate Starts for Snenia_40:

(Start: 18 @34952 has 51 MA's), (33, 34997), (35, 35000), (46, 35078),

Gene: Spartan_43 Start: 35487, Stop: 35666, Start Num: 27

Candidate Starts for Spartan_43:

(Start: 27 @35487 has 3 MA's), (38, 35529), (40, 35538), (63, 35658),

Gene: SpeedDemon_940 Start: 64127, Stop: 63927, Start Num: 24

Candidate Starts for SpeedDemon_940:

(Start: 24 @64127 has 7 MA's), (30, 64112), (40, 64067), (48, 64016),

Gene: Spooky_52 Start: 37230, Stop: 37451, Start Num: 19

Candidate Starts for Spooky_52:

(7, 37110), (13, 37188), (Start: 19 @37230 has 2 MA's), (39, 37299), (40, 37305), (42, 37320), (46, 37350), (58, 37395), (59, 37398), (62, 37416), (65, 37440),

Gene: Squiddly_59 Start: 40046, Stop: 40252, Start Num: 24

Candidate Starts for Squiddly_59:

(11, 39947), (12, 39968), (Start: 24 @40046 has 7 MA's), (40, 40106), (42, 40121), (54, 40181), (59, 40199), (65, 40241),

Gene: Tardus_57 Start: 45204, Stop: 45404, Start Num: 26

Candidate Starts for Tardus_57:

(Start: 26 @45204 has 7 MA's), (40, 45258), (43, 45282), (55, 45336),

Gene: Tiamoceli_52 Start: 42144, Stop: 42338, Start Num: 21

Candidate Starts for Tiamoceli_52:

(Start: 20 @42135 has 4 MA's), (Start: 21 @42144 has 7 MA's), (34, 42174), (44, 42234), (45, 42246),

Gene: Toniann_100 Start: 59980, Stop: 60180, Start Num: 22

Candidate Starts for Toniann_100:

(Start: 22 @59980 has 17 MA's), (39, 60037), (40, 60043), (56, 60121), (60, 60136),

Gene: Tourach_42 Start: 34709, Stop: 34924, Start Num: 18

Candidate Starts for Tourach_42:

(Start: 18 @34709 has 51 MA's), (31, 34751), (35, 34757), (38, 34781), (51, 34859), (57, 34871),

Gene: Towmatter_82 Start: 57951, Stop: 57769, Start Num: 28

Candidate Starts for Towmatter_82:

(Start: 28 @57951 has 3 MA's), (46, 57861), (53, 57834),

Gene: TriFive_40 Start: 34951, Stop: 35166, Start Num: 18

Candidate Starts for TriFive_40:

(Start: 18 @34951 has 51 MA's), (33, 34996), (35, 34999), (46, 35077),

Gene: Twonlo_49 Start: 40765, Stop: 40968, Start Num: 20

Candidate Starts for Twonlo_49:

(Start: 20 @40765 has 4 MA's), (Start: 21 @40774 has 7 MA's), (34, 40804), (44, 40864), (45, 40876),

Gene: Underpass_42 Start: 34695, Stop: 34910, Start Num: 18

Candidate Starts for Underpass_42:

(Start: 18 @34695 has 51 MA's), (31, 34737), (35, 34743), (39, 34770), (41, 34782), (51, 34845), (57, 34857),

Gene: Vetrix_42 Start: 34701, Stop: 34916, Start Num: 18

Candidate Starts for Vetrix_42:

(Start: 18 @34701 has 51 MA's), (31, 34743), (35, 34749), (39, 34776), (41, 34788), (51, 34851), (57, 34863),

Gene: ViaConlectus_55 Start: 44156, Stop: 44356, Start Num: 26

Candidate Starts for ViaConlectus_55:

(Start: 26 @44156 has 7 MA's), (40, 44210), (43, 44234), (55, 44288),

Gene: Whirlwind_41 Start: 34710, Stop: 34925, Start Num: 18

Candidate Starts for Whirlwind_41:

(Start: 18 @34710 has 51 MA's), (33, 34755), (35, 34758), (46, 34836),

Gene: Wigglewigggle_42 Start: 34727, Stop: 34942, Start Num: 18

Candidate Starts for Wigglewigggle_42:

(Start: 18 @34727 has 51 MA's), (31, 34769), (35, 34775), (39, 34802), (41, 34814), (51, 34877), (57, 34889),

Gene: Wilder_42 Start: 34700, Stop: 34915, Start Num: 18

Candidate Starts for Wilder_42:

(Start: 18 @34700 has 51 MA's), (31, 34742), (35, 34748), (39, 34775), (41, 34787), (51, 34850), (57, 34862),

Gene: WilliamBoone_100 Start: 58743, Stop: 58943, Start Num: 22

Candidate Starts for WilliamBoone_100:

(Start: 22 @58743 has 17 MA's), (47, 58854), (53, 58878),

Gene: Winky_42 Start: 34694, Stop: 34909, Start Num: 18

Candidate Starts for Winky_42:

(Start: 18 @34694 has 51 MA's), (31, 34736), (35, 34742), (39, 34769), (41, 34781), (51, 34844), (57, 34856),

Gene: Yvonnetastic_109 Start: 62358, Stop: 62561, Start Num: 25

Candidate Starts for Yvonnetastic_109:

(Start: 25 @62358 has 2 MA's), (46, 62460), (52, 62484), (57, 62499),

Gene: Zakai_42 Start: 34952, Stop: 35167, Start Num: 18

Candidate Starts for Zakai_42:

(Start: 18 @34952 has 51 MA's), (31, 34994), (35, 35000), (39, 35027), (41, 35039), (51, 35102), (57, 35114),