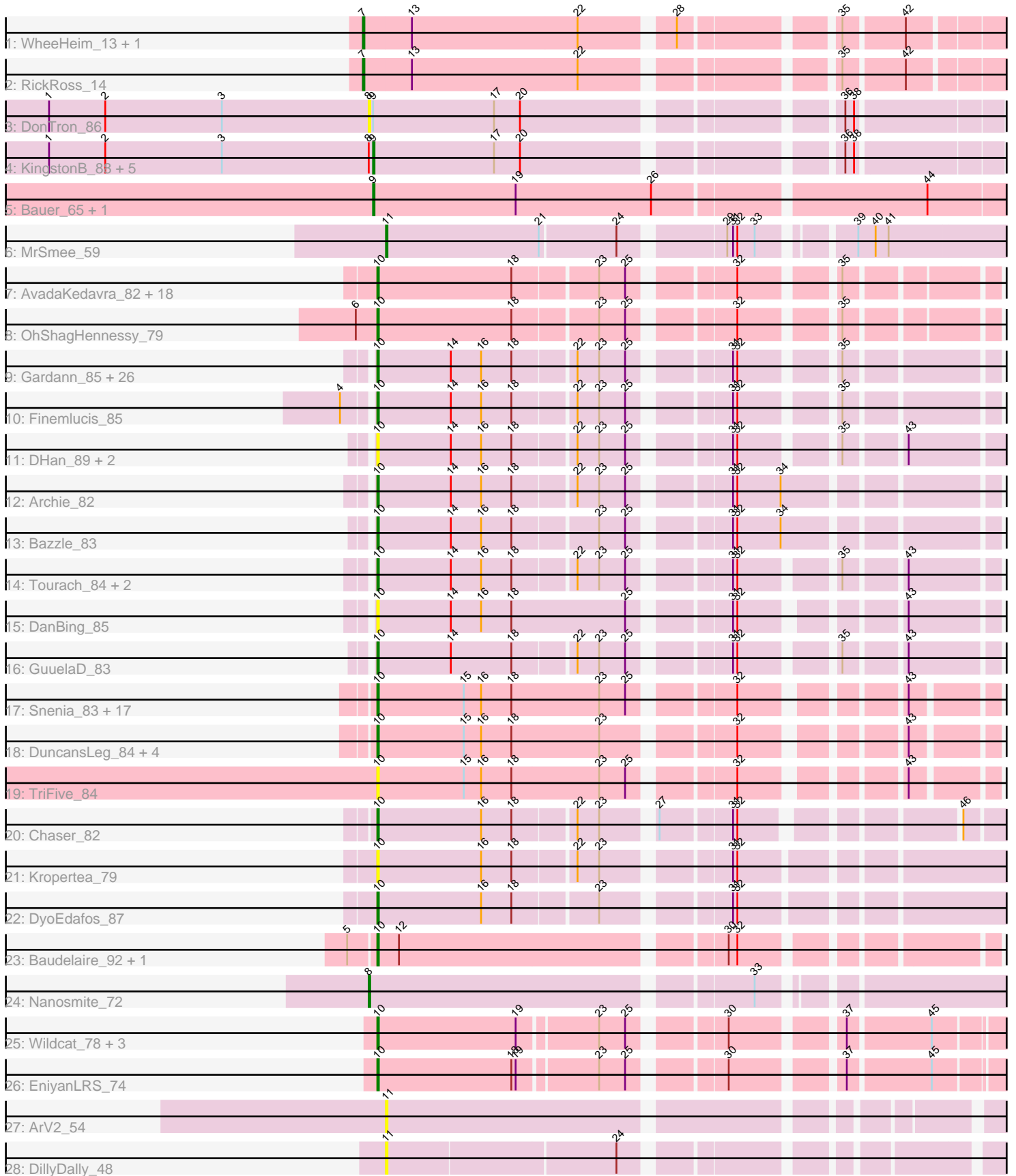


Pham 216009



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 216009 Report

This analysis was run 02/22/25 on database version 588.

Pham number 216009 has 108 members, 27 are drafts.

Phages represented in each track:

- Track 1 : WheeHeim_13, Forthebois_13
- Track 2 : RickRoss_14
- Track 3 : DonTron_86
- Track 4 : KingstonB_88, ColdSoup_89, Jollymon_89, Amo99_89, Soos_82, Sting_85
- Track 5 : Bauer_65, ThayneTheZag_76
- Track 6 : MrSmee_59
- Track 7 : AvadaKedavra_82, Appletree2_81, LeBron_81, Rose5_83, Poochiewood_80, Enceladus_79, Wyatt2_83, Silverleaf_82, UPIE_81, DirkDirk_79, Tyson_83, Zaria_83, Acquire49_82, Halena_80, MAckerman_81, JoeDirt_83, Wamburgrxpress_82, CicholasNage_79, Calm_84
- Track 8 : OhShagHennessy_79
- Track 9 : Gardann_85, Sarshaun_86, SoJulia_87, Loadrie_83, BobsGarage_85, Lewan_86, Faith1_85, DrSeegs_85, BigCheese_85, Zakai_86, MkaliMitinis3_86, Nicholasp3_85, Winky_85, Miley16_85, Vetrix_84, LilDestine_84, Kahlid_85, Rumpelstiltskin_82, Itos_85, Soap141_85, Wilder_86, Netyap_86, Gabriela_85, Wigglewiggles_84, Underpass_76, Crossroads_85, Breezona_85
- Track 10 : Finemlucis_85
- Track 11 : DHan_89, Baoshan_83, ZhongYanYuan_83
- Track 12 : Archie_82
- Track 13 : Bazzle_83
- Track 14 : Tourach_84, Hafay_86, Claus_85
- Track 15 : DanBing_85
- Track 16 : GuuelaD_83
- Track 17 : Snenia_83, MiniMac_87, Jubie_83, Finnry_83, Lumos_84, Lolly9_82, Nicholas_81, Moostard_81, Jobypre_84, Red305_85, Samty_82, MiniLon_87, Whirlwind_84, MsGreen_84, Kingsolomon_81, Bellis_82, Clautastrophe_82, Krypton555_84
- Track 18 : DuncansLeg_84, BourbonZero_85, Ellson_83, LiyuLake_83, KirDoubleO7_82
- Track 19 : TriFive_84
- Track 20 : Chaser_82
- Track 21 : Kropertea_79
- Track 22 : DyoEdafos_87
- Track 23 : Baudelaire_92, Aegeus_92
- Track 24 : Nanosmite_72
- Track 25 : Wildcat_78, MaryV_78, Azrael100_77, Cosmo_78

- Track 26 : EniyanLRS_74
- Track 27 : ArV2_54
- Track 28 : DillyDally_48

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

The start number called the most often in the published annotations is 10, it was called in 73 of the 81 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Acquire49_82, Aegeus_92, Appletree2_81, Archie_82, AvadaKedavra_82, Azrael100_77, Baoshan_83, Baudelaire_92, Bazzle_83, Bellis_82, BigCheese_85, BobsGarage_85, BourbonZero_85, Breezona_85, Calm_84, Chaser_82, CicholasNage_79, Claus_85, Clautastrophe_82, Cosmo_78, Crossroads_85, DHan_89, DanBing_85, DirkDirk_79, DrSeegs_85, DuncansLeg_84, DyoEdafos_87, Ellson_83, Enceladus_79, EniyanLRS_74, Faith1_85, Finemlucis_85, Finnry_83, Gabriela_85, Gardann_85, GuuelaD_83, Hafay_86, Halena_80, Itos_85, Jobypre_84, JoeDirt_83, Jubie_83, Kahlid_85, Kingsolomon_81, KirDoubleO7_82, Kropertea_79, Krypton555_84, LeBron_81, Lewan_86, LilDestine_84, LiyuLake_83, Loadrie_83, Lolly9_82, Lumos_84, MAckerman_81, MaryV_78, Miley16_85, MiniLon_87, MiniMac_87, MkaliMitinis3_86, Moostard_81, MsGreen_84, Netyap_86, Nicholas_81, Nicholasp3_85, OhShagHennessy_79, Pochiewood_80, Red305_85, Rose5_83, Rumpelstiltskin_82, Samty_82, Sarshaun_86, Silverleaf_82, Snenia_83, SoJulia_87, Soap141_85, Tourach_84, TriFive_84, Tyson_83, UPIE_81, Underpass_76, Vetrix_84, Wamburggrxpress_82, Whirlwind_84, Wigglewiggle_84, Wildcat_78, Wilder_86, Winky_85, Wyatt2_83, Zakai_86, Zaria_83, ZhongYanYuan_83,

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

-

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

- Amo99_89, ArV2_54, Bauer_65, ColdSoup_89, DillyDally_48, DonTron_86, Forthebois_13, Jollymon_89, KingstonB_88, MrSmee_59, Nanosmite_72, RickRoss_14, Soos_82, Sting_85, ThayneTheZag_76, WheeHeim_13,

Summary by start number:

Start 7:

- Found in 3 of 108 (2.8%) of genes in pham
- Manual Annotations of this start: 3 of 81
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Forthebois_13 (BO), RickRoss_14 (BO), WheeHeim_13 (BO),

Start 8:

- Found in 8 of 108 (7.4%) of genes in pham
- Manual Annotations of this start: 1 of 81
- Called 25.0% of time when present
- Phage (with cluster) where this start called: DonTron_86 (CP), Nanosmite_72 (M3),

Start 9:

- Found in 9 of 108 (8.3%) of genes in pham
- Manual Annotations of this start: 3 of 81
- Called 88.9% of time when present
- Phage (with cluster) where this start called: Amo99_89 (CP), Bauer_65 (FN), ColdSoup_89 (CP), Jollymon_89 (CP), KingstonB_88 (CP), Soos_82 (CP), Sting_85 (CP), ThayneTheZag_76 (AY),

Start 10:

- Found in 92 of 108 (85.2%) of genes in pham
- Manual Annotations of this start: 73 of 81
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Acquire49_82 (L1), Aegeus_92 (L5), Appletree2_81 (L1), Archie_82 (L2), AvadaKedavra_82 (L1), Azrael100_77 (V), Baoshan_83 (L2), Baudelaire_92 (L5), Bazzle_83 (L2), Bellis_82 (L3), BigCheese_85 (L2), BobsGarage_85 (L2), BourbonZero_85 (L3), Breezona_85 (L2), Calm_84 (L1), Chaser_82 (L4), CicholasNage_79 (L1), Claus_85 (L2), Clautastrophe_82 (L3), Cosmo_78 (V), Crossroads_85 (L2), DHan_89 (L2), DanBing_85 (L2), DirkDirk_79 (L1), DrSeegs_85 (L2), DuncansLeg_84 (L3), DyoEdafos_87 (L4), Ellison_83 (L3), Enceladus_79 (L1), EniyanLRS_74 (V), Faith1_85 (L2), Finemlucis_85 (L2), Finny_83 (L3), Gabriela_85 (L2), Gardann_85 (L2), GuuelaD_83 (L2), Hafay_86 (L2), Halena_80 (L1), Itos_85 (L2), Jobypre_84 (L3), JoeDirt_83 (L1), Jubie_83 (L3), Kahlid_85 (L2), Kingsolomon_81 (L3), KirDoubleO7_82 (L3), Kropertea_79 (L4), Krypton555_84 (L3), LeBron_81 (L1), Lewan_86 (L2), LilDestine_84 (L2), LiyuLake_83 (L3), Loadrie_83 (L2), Lolly9_82 (L3), Lumos_84 (L3), MAckerman_81 (L1), MaryV_78 (V), Miley16_85 (L2), MiniLon_87 (L3), MiniMac_87 (L3), MkaliMitinis3_86 (L2), Moostard_81 (L3), MsGreen_84 (L3), Netyap_86 (L2), Nicholas_81 (L3), Nicholasp3_85 (L2), OhShagHennessy_79 (L1), Poochiewood_80 (L1), Red305_85 (L3), Rose5_83 (L1), Rumpelstiltskin_82 (L2), Samty_82 (L3), Sarshaun_86 (L2), Silverleaf_82 (L1), Snenia_83 (L3), SoJulia_87 (L2), Soap141_85 (L2), Tourach_84 (L2), TriFive_84 (L3), Tyson_83 (L1), UPIE_81 (L1), Underpass_76 (L2), Vetrix_84 (L2), Wamburgxpress_82 (L1), Whirlwind_84 (L3), Wigglewiggles_84 (L2), Wildcat_78 (V), Wilder_86 (L2), Winky_85 (L2), Wyatt2_83 (L1), Zakai_86 (L2), Zaria_83 (L1), ZhongYanYuan_83 (L2),

Start 11:

- Found in 3 of 108 (2.8%) of genes in pham
- Manual Annotations of this start: 1 of 81
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ArV2_54 (singleton), DillyDally_48 (singleton), MrSmee_59 (FQ),

Summary by clusters:

There are 13 clusters represented in this pham: FQ, singleton, V, BO, L4, L5, L2, L3, M3, L1, AY, CP, FN,

Info for manual annotations of cluster BO:

- Start number 7 was manually annotated 3 times for cluster BO.

Info for manual annotations of cluster CP:

- Start number 9 was manually annotated 2 times for cluster CP.

Info for manual annotations of cluster FN:

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

Info for manual annotations of cluster FQ:

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

Info for manual annotations of cluster L1:

- Start number 10 was manually annotated 19 times for cluster L1.

Info for manual annotations of cluster L2:

- Start number 10 was manually annotated 28 times for cluster L2.

Info for manual annotations of cluster L3:

- Start number 10 was manually annotated 17 times for cluster L3.

Info for manual annotations of cluster L4:

- Start number 10 was manually annotated 2 times for cluster L4.

Info for manual annotations of cluster L5:

- Start number 10 was manually annotated 2 times for cluster L5.

Info for manual annotations of cluster M3:

- Start number 8 was manually annotated 1 time for cluster M3.

Info for manual annotations of cluster V:

- Start number 10 was manually annotated 5 times for cluster V.

Gene Information:

Gene: Acquire49_82 Start: 53525, Stop: 53908, Start Num: 10

Candidate Starts for Acquire49_82:

(Start: 10 @53525 has 73 MA's), (18, 53618), (23, 53672), (25, 53690), (32, 53750), (35, 53807),

Gene: Aegeus_92 Start: 56890, Stop: 57282, Start Num: 10

Candidate Starts for Aegeus_92:

(5, 56872), (Start: 10 @56890 has 73 MA's), (12, 56905), (30, 57115), (32, 57121),

Gene: Amo99_89 Start: 55869, Stop: 56291, Start Num: 9

Candidate Starts for Amo99_89:

(1, 55644), (2, 55683), (3, 55764), (Start: 8 @55866 has 1 MA's), (Start: 9 @55869 has 3 MA's), (17, 55953), (20, 55971), (36, 56163), (38, 56169),

Gene: Appletree2_81 Start: 53136, Stop: 53519, Start Num: 10

Candidate Starts for Appletree2_81:

(Start: 10 @53136 has 73 MA's), (18, 53229), (23, 53283), (25, 53301), (32, 53361), (35, 53418),

Gene: ArV2_54 Start: 30423, Stop: 30827, Start Num: 11

Candidate Starts for ArV2_54:

(Start: 11 @30423 has 1 MA's),

Gene: Archie_82 Start: 55052, Stop: 55447, Start Num: 10

Candidate Starts for Archie_82:

(Start: 10 @55052 has 73 MA's), (14, 55103), (16, 55124), (18, 55145), (22, 55184), (23, 55199), (25, 55217), (31, 55274), (32, 55277), (34, 55307),

Gene: AvadaKedavra_82 Start: 53604, Stop: 53987, Start Num: 10

Candidate Starts for AvadaKedavra_82:

(Start: 10 @53604 has 73 MA's), (18, 53697), (23, 53751), (25, 53769), (32, 53829), (35, 53886),

Gene: Azrael100_77 Start: 49155, Stop: 49544, Start Num: 10

Candidate Starts for Azrael100_77:

(Start: 10 @49155 has 73 MA's), (19, 49251), (23, 49302), (25, 49320), (30, 49374), (37, 49440), (45, 49494),

Gene: Baoshan_83 Start: 55708, Stop: 56106, Start Num: 10

Candidate Starts for Baoshan_83:

(Start: 10 @55708 has 73 MA's), (14, 55759), (16, 55780), (18, 55801), (22, 55840), (23, 55855), (25, 55873), (31, 55930), (32, 55933), (35, 55990), (43, 56026),

Gene: Baudelaire_92 Start: 56890, Stop: 57282, Start Num: 10

Candidate Starts for Baudelaire_92:

(5, 56872), (Start: 10 @56890 has 73 MA's), (12, 56905), (30, 57115), (32, 57121),

Gene: Bauer_65 Start: 36668, Stop: 37132, Start Num: 9

Candidate Starts for Bauer_65:

(Start: 9 @36668 has 3 MA's), (19, 36767), (26, 36860), (44, 37037),

Gene: Bazzle_83 Start: 55608, Stop: 56003, Start Num: 10

Candidate Starts for Bazzle_83:

(Start: 10 @55608 has 73 MA's), (14, 55659), (16, 55680), (18, 55701), (23, 55755), (25, 55773), (31, 55830), (32, 55833), (34, 55863),

Gene: Bellis_82 Start: 55408, Stop: 55791, Start Num: 10

Candidate Starts for Bellis_82:

(Start: 10 @55408 has 73 MA's), (15, 55468), (16, 55480), (18, 55501), (23, 55561), (25, 55579), (32, 55639), (43, 55729),

Gene: BigCheese_85 Start: 55471, Stop: 55857, Start Num: 10

Candidate Starts for BigCheese_85:

(Start: 10 @55471 has 73 MA's), (14, 55522), (16, 55543), (18, 55564), (22, 55603), (23, 55618), (25, 55636), (31, 55693), (32, 55696), (35, 55753),

Gene: BobsGarage_85 Start: 55471, Stop: 55857, Start Num: 10

Candidate Starts for BobsGarage_85:

(Start: 10 @55471 has 73 MA's), (14, 55522), (16, 55543), (18, 55564), (22, 55603), (23, 55618), (25, 55636), (31, 55693), (32, 55696), (35, 55753),

Gene: BourbonZero_85 Start: 55437, Stop: 55820, Start Num: 10

Candidate Starts for BourbonZero_85:

(Start: 10 @55437 has 73 MA's), (15, 55497), (16, 55509), (18, 55530), (23, 55590), (32, 55668), (43, 55758),

Gene: Breezona_85 Start: 55471, Stop: 55857, Start Num: 10

Candidate Starts for Breezona_85:

(Start: 10 @55471 has 73 MA's), (14, 55522), (16, 55543), (18, 55564), (22, 55603), (23, 55618), (25, 55636), (31, 55693), (32, 55696), (35, 55753),

Gene: Calm_84 Start: 53847, Stop: 54230, Start Num: 10

Candidate Starts for Calm_84:

(Start: 10 @53847 has 73 MA's), (18, 53940), (23, 53994), (25, 54012), (32, 54072), (35, 54129),

Gene: Chaser_82 Start: 53878, Stop: 54270, Start Num: 10

Candidate Starts for Chaser_82:

(Start: 10 @53878 has 73 MA's), (16, 53950), (18, 53971), (22, 54010), (23, 54025), (27, 54055), (31, 54100), (32, 54103), (46, 54226),

Gene: CicholasNage_79 Start: 53189, Stop: 53572, Start Num: 10

Candidate Starts for CicholasNage_79:

(Start: 10 @53189 has 73 MA's), (18, 53282), (23, 53336), (25, 53354), (32, 53414), (35, 53471),

Gene: Claus_85 Start: 55406, Stop: 55789, Start Num: 10

Candidate Starts for Claus_85:

(Start: 10 @55406 has 73 MA's), (14, 55457), (16, 55478), (18, 55499), (22, 55538), (23, 55553), (25, 55571), (31, 55628), (32, 55631), (35, 55688), (43, 55724),

Gene: Clautastrophe_82 Start: 55406, Stop: 55789, Start Num: 10

Candidate Starts for Clautastrophe_82:

(Start: 10 @55406 has 73 MA's), (15, 55466), (16, 55478), (18, 55499), (23, 55559), (25, 55577), (32, 55637), (43, 55727),

Gene: ColdSoup_89 Start: 55950, Stop: 56372, Start Num: 9

Candidate Starts for ColdSoup_89:

(1, 55725), (2, 55764), (3, 55845), (Start: 8 @55947 has 1 MA's), (Start: 9 @55950 has 3 MA's), (17, 56034), (20, 56052), (36, 56244), (38, 56250),

Gene: Cosmo_78 Start: 49156, Stop: 49545, Start Num: 10

Candidate Starts for Cosmo_78:

(Start: 10 @49156 has 73 MA's), (19, 49252), (23, 49303), (25, 49321), (30, 49375), (37, 49441), (45, 49495),

Gene: Crossroads_85 Start: 55546, Stop: 55932, Start Num: 10

Candidate Starts for Crossroads_85:

(Start: 10 @55546 has 73 MA's), (14, 55597), (16, 55618), (18, 55639), (22, 55678), (23, 55693), (25, 55711), (31, 55768), (32, 55771), (35, 55828),

Gene: DHan_89 Start: 55771, Stop: 56169, Start Num: 10

Candidate Starts for DHan_89:

(Start: 10 @55771 has 73 MA's), (14, 55822), (16, 55843), (18, 55864), (22, 55903), (23, 55918), (25, 55936), (31, 55993), (32, 55996), (35, 56053), (43, 56089),

Gene: DanBing_85 Start: 55276, Stop: 55665, Start Num: 10

Candidate Starts for DanBing_85:

(Start: 10 @55276 has 73 MA's), (14, 55327), (16, 55348), (18, 55369), (25, 55447), (31, 55504), (32, 55507), (43, 55597),

Gene: DillyDally_48 Start: 30225, Stop: 30653, Start Num: 11

Candidate Starts for DillyDally_48:
(Start: 11 @30225 has 1 MA's), (24, 30378),

Gene: DirkDirk_79 Start: 52716, Stop: 53099, Start Num: 10
Candidate Starts for DirkDirk_79:
(Start: 10 @52716 has 73 MA's), (18, 52809), (23, 52863), (25, 52881), (32, 52941), (35, 52998),

Gene: DonTron_86 Start: 55825, Stop: 56250, Start Num: 8
Candidate Starts for DonTron_86:
(1, 55603), (2, 55642), (3, 55723), (Start: 8 @55825 has 1 MA's), (Start: 9 @55828 has 3 MA's), (17, 55912), (20, 55930), (36, 56122), (38, 56128),

Gene: DrSeegs_85 Start: 55471, Stop: 55857, Start Num: 10
Candidate Starts for DrSeegs_85:
(Start: 10 @55471 has 73 MA's), (14, 55522), (16, 55543), (18, 55564), (22, 55603), (23, 55618), (25, 55636), (31, 55693), (32, 55696), (35, 55753),

Gene: DuncansLeg_84 Start: 55425, Stop: 55808, Start Num: 10
Candidate Starts for DuncansLeg_84:
(Start: 10 @55425 has 73 MA's), (15, 55485), (16, 55497), (18, 55518), (23, 55578), (32, 55656), (43, 55746),

Gene: DyoEdafos_87 Start: 54732, Stop: 55139, Start Num: 10
Candidate Starts for DyoEdafos_87:
(Start: 10 @54732 has 73 MA's), (16, 54804), (18, 54825), (23, 54879), (31, 54954), (32, 54957),

Gene: Ellson_83 Start: 55740, Stop: 56123, Start Num: 10
Candidate Starts for Ellson_83:
(Start: 10 @55740 has 73 MA's), (15, 55800), (16, 55812), (18, 55833), (23, 55893), (32, 55971), (43, 56061),

Gene: Enceladus_79 Start: 53493, Stop: 53876, Start Num: 10
Candidate Starts for Enceladus_79:
(Start: 10 @53493 has 73 MA's), (18, 53586), (23, 53640), (25, 53658), (32, 53718), (35, 53775),

Gene: EniyanLRS_74 Start: 48895, Stop: 49284, Start Num: 10
Candidate Starts for EniyanLRS_74:
(Start: 10 @48895 has 73 MA's), (18, 48988), (19, 48991), (23, 49042), (25, 49060), (30, 49114), (37, 49180), (45, 49234),

Gene: Faith1_85 Start: 55471, Stop: 55857, Start Num: 10
Candidate Starts for Faith1_85:
(Start: 10 @55471 has 73 MA's), (14, 55522), (16, 55543), (18, 55564), (22, 55603), (23, 55618), (25, 55636), (31, 55693), (32, 55696), (35, 55753),

Gene: Finemlucis_85 Start: 56160, Stop: 56546, Start Num: 10
Candidate Starts for Finemlucis_85:
(4, 56142), (Start: 10 @56160 has 73 MA's), (14, 56211), (16, 56232), (18, 56253), (22, 56292), (23, 56307), (25, 56325), (31, 56382), (32, 56385), (35, 56442),

Gene: Finnry_83 Start: 55427, Stop: 55810, Start Num: 10
Candidate Starts for Finnry_83:

(Start: 10 @55427 has 73 MA's), (15, 55487), (16, 55499), (18, 55520), (23, 55580), (25, 55598), (32, 55658), (43, 55748),

Gene: Forthebois_13 Start: 6604, Stop: 6182, Start Num: 7

Candidate Starts for Forthebois_13:

(Start: 7 @6604 has 3 MA's), (13, 6571), (22, 6457), (28, 6400), (35, 6307), (42, 6268),

Gene: Gabriela_85 Start: 54817, Stop: 55203, Start Num: 10

Candidate Starts for Gabriela_85:

(Start: 10 @54817 has 73 MA's), (14, 54868), (16, 54889), (18, 54910), (22, 54949), (23, 54964), (25, 54982), (31, 55039), (32, 55042), (35, 55099),

Gene: Gardann_85 Start: 55306, Stop: 55692, Start Num: 10

Candidate Starts for Gardann_85:

(Start: 10 @55306 has 73 MA's), (14, 55357), (16, 55378), (18, 55399), (22, 55438), (23, 55453), (25, 55471), (31, 55528), (32, 55531), (35, 55588),

Gene: GuuelaD_83 Start: 55445, Stop: 55831, Start Num: 10

Candidate Starts for GuuelaD_83:

(Start: 10 @55445 has 73 MA's), (14, 55496), (18, 55538), (22, 55577), (23, 55592), (25, 55610), (31, 55667), (32, 55670), (35, 55727), (43, 55763),

Gene: Hafay_86 Start: 55401, Stop: 55784, Start Num: 10

Candidate Starts for Hafay_86:

(Start: 10 @55401 has 73 MA's), (14, 55452), (16, 55473), (18, 55494), (22, 55533), (23, 55548), (25, 55566), (31, 55623), (32, 55626), (35, 55683), (43, 55719),

Gene: Halena_80 Start: 52763, Stop: 53146, Start Num: 10

Candidate Starts for Halena_80:

(Start: 10 @52763 has 73 MA's), (18, 52856), (23, 52910), (25, 52928), (32, 52988), (35, 53045),

Gene: Itos_85 Start: 54377, Stop: 54763, Start Num: 10

Candidate Starts for Itos_85:

(Start: 10 @54377 has 73 MA's), (14, 54428), (16, 54449), (18, 54470), (22, 54509), (23, 54524), (25, 54542), (31, 54599), (32, 54602), (35, 54659),

Gene: Jobypre_84 Start: 55406, Stop: 55789, Start Num: 10

Candidate Starts for Jobypre_84:

(Start: 10 @55406 has 73 MA's), (15, 55466), (16, 55478), (18, 55499), (23, 55559), (25, 55577), (32, 55637), (43, 55727),

Gene: JoeDirt_83 Start: 54091, Stop: 54474, Start Num: 10

Candidate Starts for JoeDirt_83:

(Start: 10 @54091 has 73 MA's), (18, 54184), (23, 54238), (25, 54256), (32, 54316), (35, 54373),

Gene: Jollymon_89 Start: 55950, Stop: 56372, Start Num: 9

Candidate Starts for Jollymon_89:

(1, 55725), (2, 55764), (3, 55845), (Start: 8 @55947 has 1 MA's), (Start: 9 @55950 has 3 MA's), (17, 56034), (20, 56052), (36, 56244), (38, 56250),

Gene: Jubie_83 Start: 55541, Stop: 55924, Start Num: 10

Candidate Starts for Jubie_83:

(Start: 10 @55541 has 73 MA's), (15, 55601), (16, 55613), (18, 55634), (23, 55694), (25, 55712), (32, 55772), (43, 55862),

Gene: Kahlid_85 Start: 55257, Stop: 55643, Start Num: 10

Candidate Starts for Kahlid_85:

(Start: 10 @55257 has 73 MA's), (14, 55308), (16, 55329), (18, 55350), (22, 55389), (23, 55404), (25, 55422), (31, 55479), (32, 55482), (35, 55539),

Gene: Kingsolomon_81 Start: 55183, Stop: 55566, Start Num: 10

Candidate Starts for Kingsolomon_81:

(Start: 10 @55183 has 73 MA's), (15, 55243), (16, 55255), (18, 55276), (23, 55336), (25, 55354), (32, 55414), (43, 55504),

Gene: KingstonB_88 Start: 55361, Stop: 55783, Start Num: 9

Candidate Starts for KingstonB_88:

(1, 55136), (2, 55175), (3, 55256), (Start: 8 @55358 has 1 MA's), (Start: 9 @55361 has 3 MA's), (17, 55445), (20, 55463), (36, 55655), (38, 55661),

Gene: KirDoubleO7_82 Start: 55427, Stop: 55810, Start Num: 10

Candidate Starts for KirDoubleO7_82:

(Start: 10 @55427 has 73 MA's), (15, 55487), (16, 55499), (18, 55520), (23, 55580), (32, 55658), (43, 55748),

Gene: Kropertea_79 Start: 54008, Stop: 54415, Start Num: 10

Candidate Starts for Kropertea_79:

(Start: 10 @54008 has 73 MA's), (16, 54080), (18, 54101), (22, 54140), (23, 54155), (31, 54230), (32, 54233),

Gene: Krypton555_84 Start: 55452, Stop: 55835, Start Num: 10

Candidate Starts for Krypton555_84:

(Start: 10 @55452 has 73 MA's), (15, 55512), (16, 55524), (18, 55545), (23, 55605), (25, 55623), (32, 55683), (43, 55773),

Gene: LeBron_81 Start: 52762, Stop: 53145, Start Num: 10

Candidate Starts for LeBron_81:

(Start: 10 @52762 has 73 MA's), (18, 52855), (23, 52909), (25, 52927), (32, 52987), (35, 53044),

Gene: Lewan_86 Start: 55312, Stop: 55698, Start Num: 10

Candidate Starts for Lewan_86:

(Start: 10 @55312 has 73 MA's), (14, 55363), (16, 55384), (18, 55405), (22, 55444), (23, 55459), (25, 55477), (31, 55534), (32, 55537), (35, 55594),

Gene: LilDestine_84 Start: 55161, Stop: 55547, Start Num: 10

Candidate Starts for LilDestine_84:

(Start: 10 @55161 has 73 MA's), (14, 55212), (16, 55233), (18, 55254), (22, 55293), (23, 55308), (25, 55326), (31, 55383), (32, 55386), (35, 55443),

Gene: LiyuLake_83 Start: 55500, Stop: 55883, Start Num: 10

Candidate Starts for LiyuLake_83:

(Start: 10 @55500 has 73 MA's), (15, 55560), (16, 55572), (18, 55593), (23, 55653), (32, 55731), (43, 55821),

Gene: Loadrie_83 Start: 55336, Stop: 55722, Start Num: 10

Candidate Starts for Loadrie_83:

(Start: 10 @55336 has 73 MA's), (14, 55387), (16, 55408), (18, 55429), (22, 55468), (23, 55483), (25, 55501), (31, 55558), (32, 55561), (35, 55618),

Gene: Lolly9_82 Start: 55259, Stop: 55642, Start Num: 10

Candidate Starts for Lolly9_82:

(Start: 10 @55259 has 73 MA's), (15, 55319), (16, 55331), (18, 55352), (23, 55412), (25, 55430), (32, 55490), (43, 55580),

Gene: Lumos_84 Start: 55403, Stop: 55786, Start Num: 10

Candidate Starts for Lumos_84:

(Start: 10 @55403 has 73 MA's), (15, 55463), (16, 55475), (18, 55496), (23, 55556), (25, 55574), (32, 55634), (43, 55724),

Gene: MAckerman_81 Start: 52756, Stop: 53139, Start Num: 10

Candidate Starts for MAckerman_81:

(Start: 10 @52756 has 73 MA's), (18, 52849), (23, 52903), (25, 52921), (32, 52981), (35, 53038),

Gene: MaryV_78 Start: 48977, Stop: 49366, Start Num: 10

Candidate Starts for MaryV_78:

(Start: 10 @48977 has 73 MA's), (19, 49073), (23, 49124), (25, 49142), (30, 49196), (37, 49262), (45, 49316),

Gene: Miley16_85 Start: 55471, Stop: 55857, Start Num: 10

Candidate Starts for Miley16_85:

(Start: 10 @55471 has 73 MA's), (14, 55522), (16, 55543), (18, 55564), (22, 55603), (23, 55618), (25, 55636), (31, 55693), (32, 55696), (35, 55753),

Gene: MiniLon_87 Start: 55260, Stop: 55643, Start Num: 10

Candidate Starts for MiniLon_87:

(Start: 10 @55260 has 73 MA's), (15, 55320), (16, 55332), (18, 55353), (23, 55413), (25, 55431), (32, 55491), (43, 55581),

Gene: MiniMac_87 Start: 55255, Stop: 55638, Start Num: 10

Candidate Starts for MiniMac_87:

(Start: 10 @55255 has 73 MA's), (15, 55315), (16, 55327), (18, 55348), (23, 55408), (25, 55426), (32, 55486), (43, 55576),

Gene: MkaliMitinis3_86 Start: 55320, Stop: 55706, Start Num: 10

Candidate Starts for MkaliMitinis3_86:

(Start: 10 @55320 has 73 MA's), (14, 55371), (16, 55392), (18, 55413), (22, 55452), (23, 55467), (25, 55485), (31, 55542), (32, 55545), (35, 55602),

Gene: Moostard_81 Start: 55178, Stop: 55561, Start Num: 10

Candidate Starts for Moostard_81:

(Start: 10 @55178 has 73 MA's), (15, 55238), (16, 55250), (18, 55271), (23, 55331), (25, 55349), (32, 55409), (43, 55499),

Gene: MrSmee_59 Start: 34937, Stop: 35392, Start Num: 11

Candidate Starts for MrSmee_59:

(Start: 11 @34937 has 1 MA's), (21, 35042), (24, 35093), (29, 35156), (31, 35159), (32, 35162), (33, 35174), (39, 35228), (40, 35240), (41, 35249),

Gene: MsGreen_84 Start: 55405, Stop: 55788, Start Num: 10

Candidate Starts for MsGreen_84:

(Start: 10 @55405 has 73 MA's), (15, 55465), (16, 55477), (18, 55498), (23, 55558), (25, 55576), (32, 55636), (43, 55726),

Gene: Nanosmite_72 Start: 45490, Stop: 45942, Start Num: 8

Candidate Starts for Nanosmite_72:

(Start: 8 @45490 has 1 MA's), (33, 45739),

Gene: Netyap_86 Start: 55472, Stop: 55858, Start Num: 10

Candidate Starts for Netyap_86:

(Start: 10 @55472 has 73 MA's), (14, 55523), (16, 55544), (18, 55565), (22, 55604), (23, 55619), (25, 55637), (31, 55694), (32, 55697), (35, 55754),

Gene: Nicholas_81 Start: 55183, Stop: 55566, Start Num: 10

Candidate Starts for Nicholas_81:

(Start: 10 @55183 has 73 MA's), (15, 55243), (16, 55255), (18, 55276), (23, 55336), (25, 55354), (32, 55414), (43, 55504),

Gene: Nicholasp3_85 Start: 55306, Stop: 55692, Start Num: 10

Candidate Starts for Nicholasp3_85:

(Start: 10 @55306 has 73 MA's), (14, 55357), (16, 55378), (18, 55399), (22, 55438), (23, 55453), (25, 55471), (31, 55528), (32, 55531), (35, 55588),

Gene: OhShagHennessy_79 Start: 53016, Stop: 53399, Start Num: 10

Candidate Starts for OhShagHennessy_79:

(6, 53001), (Start: 10 @53016 has 73 MA's), (18, 53109), (23, 53163), (25, 53181), (32, 53241), (35, 53298),

Gene: Pochiewood_80 Start: 54099, Stop: 54482, Start Num: 10

Candidate Starts for Pochiewood_80:

(Start: 10 @54099 has 73 MA's), (18, 54192), (23, 54246), (25, 54264), (32, 54324), (35, 54381),

Gene: Red305_85 Start: 55406, Stop: 55789, Start Num: 10

Candidate Starts for Red305_85:

(Start: 10 @55406 has 73 MA's), (15, 55466), (16, 55478), (18, 55499), (23, 55559), (25, 55577), (32, 55637), (43, 55727),

Gene: RickRoss_14 Start: 6690, Stop: 6268, Start Num: 7

Candidate Starts for RickRoss_14:

(Start: 7 @6690 has 3 MA's), (13, 6657), (22, 6543), (35, 6393), (42, 6354),

Gene: Rose5_83 Start: 53936, Stop: 54319, Start Num: 10

Candidate Starts for Rose5_83:

(Start: 10 @53936 has 73 MA's), (18, 54029), (23, 54083), (25, 54101), (32, 54161), (35, 54218),

Gene: Rumpelstiltskin_82 Start: 55099, Stop: 55485, Start Num: 10

Candidate Starts for Rumpelstiltskin_82:

(Start: 10 @55099 has 73 MA's), (14, 55150), (16, 55171), (18, 55192), (22, 55231), (23, 55246), (25, 55264), (31, 55321), (32, 55324), (35, 55381),

Gene: Samty_82 Start: 55171, Stop: 55554, Start Num: 10

Candidate Starts for Samty_82:

(Start: 10 @55171 has 73 MA's), (15, 55231), (16, 55243), (18, 55264), (23, 55324), (25, 55342), (32, 55402), (43, 55492),

Gene: Sarshaun_86 Start: 55564, Stop: 55950, Start Num: 10

Candidate Starts for Sarshaun_86:

(Start: 10 @55564 has 73 MA's), (14, 55615), (16, 55636), (18, 55657), (22, 55696), (23, 55711), (25, 55729), (31, 55786), (32, 55789), (35, 55846),

Gene: Silverleaf_82 Start: 53392, Stop: 53775, Start Num: 10

Candidate Starts for Silverleaf_82:

(Start: 10 @53392 has 73 MA's), (18, 53485), (23, 53539), (25, 53557), (32, 53617), (35, 53674),

Gene: Snenia_83 Start: 55407, Stop: 55790, Start Num: 10

Candidate Starts for Snenia_83:

(Start: 10 @55407 has 73 MA's), (15, 55467), (16, 55479), (18, 55500), (23, 55560), (25, 55578), (32, 55638), (43, 55728),

Gene: SoJulia_87 Start: 56632, Stop: 57018, Start Num: 10

Candidate Starts for SoJulia_87:

(Start: 10 @56632 has 73 MA's), (14, 56683), (16, 56704), (18, 56725), (22, 56764), (23, 56779), (25, 56797), (31, 56854), (32, 56857), (35, 56914),

Gene: Soap141_85 Start: 55564, Stop: 55950, Start Num: 10

Candidate Starts for Soap141_85:

(Start: 10 @55564 has 73 MA's), (14, 55615), (16, 55636), (18, 55657), (22, 55696), (23, 55711), (25, 55729), (31, 55786), (32, 55789), (35, 55846),

Gene: Soos_82 Start: 55154, Stop: 55576, Start Num: 9

Candidate Starts for Soos_82:

(1, 54929), (2, 54968), (3, 55049), (Start: 8 @55151 has 1 MA's), (Start: 9 @55154 has 3 MA's), (17, 55238), (20, 55256), (36, 55448), (38, 55454),

Gene: Sting_85 Start: 55593, Stop: 56015, Start Num: 9

Candidate Starts for Sting_85:

(1, 55368), (2, 55407), (3, 55488), (Start: 8 @55590 has 1 MA's), (Start: 9 @55593 has 3 MA's), (17, 55677), (20, 55695), (36, 55887), (38, 55893),

Gene: ThayneTheZag_76 Start: 38042, Stop: 38506, Start Num: 9

Candidate Starts for ThayneTheZag_76:

(Start: 9 @38042 has 3 MA's), (19, 38141), (26, 38234), (44, 38411),

Gene: Tourach_84 Start: 55589, Stop: 55975, Start Num: 10

Candidate Starts for Tourach_84:

(Start: 10 @55589 has 73 MA's), (14, 55640), (16, 55661), (18, 55682), (22, 55721), (23, 55736), (25, 55754), (31, 55811), (32, 55814), (35, 55871), (43, 55907),

Gene: TriFive_84 Start: 55519, Stop: 55902, Start Num: 10

Candidate Starts for TriFive_84:

(Start: 10 @55519 has 73 MA's), (15, 55579), (16, 55591), (18, 55612), (23, 55672), (25, 55690), (32, 55750), (43, 55840),

Gene: Tyson_83 Start: 53862, Stop: 54245, Start Num: 10

Candidate Starts for Tyson_83:

(Start: 10 @53862 has 73 MA's), (18, 53955), (23, 54009), (25, 54027), (32, 54087), (35, 54144),

Gene: UPIE_81 Start: 53458, Stop: 53841, Start Num: 10

Candidate Starts for UPIE_81:

(Start: 10 @53458 has 73 MA's), (18, 53551), (23, 53605), (25, 53623), (32, 53683), (35, 53740),

Gene: Underpass_76 Start: 50342, Stop: 50728, Start Num: 10

Candidate Starts for Underpass_76:

(Start: 10 @50342 has 73 MA's), (14, 50393), (16, 50414), (18, 50435), (22, 50474), (23, 50489), (25, 50507), (31, 50564), (32, 50567), (35, 50624),

Gene: Vetrix_84 Start: 55168, Stop: 55554, Start Num: 10

Candidate Starts for Vetrix_84:

(Start: 10 @55168 has 73 MA's), (14, 55219), (16, 55240), (18, 55261), (22, 55300), (23, 55315), (25, 55333), (31, 55390), (32, 55393), (35, 55450),

Gene: Wamburgexpress_82 Start: 53897, Stop: 54280, Start Num: 10

Candidate Starts for Wamburgexpress_82:

(Start: 10 @53897 has 73 MA's), (18, 53990), (23, 54044), (25, 54062), (32, 54122), (35, 54179),

Gene: WheeHeim_13 Start: 6628, Stop: 6206, Start Num: 7

Candidate Starts for WheeHeim_13:

(Start: 7 @6628 has 3 MA's), (13, 6595), (22, 6481), (28, 6424), (35, 6331), (42, 6292),

Gene: Whirlwind_84 Start: 55415, Stop: 55798, Start Num: 10

Candidate Starts for Whirlwind_84:

(Start: 10 @55415 has 73 MA's), (15, 55475), (16, 55487), (18, 55508), (23, 55568), (25, 55586), (32, 55646), (43, 55736),

Gene: Wigglewobble_84 Start: 55113, Stop: 55499, Start Num: 10

Candidate Starts for Wigglewobble_84:

(Start: 10 @55113 has 73 MA's), (14, 55164), (16, 55185), (18, 55206), (22, 55245), (23, 55260), (25, 55278), (31, 55335), (32, 55338), (35, 55395),

Gene: Wildcat_78 Start: 48987, Stop: 49376, Start Num: 10

Candidate Starts for Wildcat_78:

(Start: 10 @48987 has 73 MA's), (19, 49083), (23, 49134), (25, 49152), (30, 49206), (37, 49272), (45, 49326),

Gene: Wilder_86 Start: 55257, Stop: 55643, Start Num: 10

Candidate Starts for Wilder_86:

(Start: 10 @55257 has 73 MA's), (14, 55308), (16, 55329), (18, 55350), (22, 55389), (23, 55404), (25, 55422), (31, 55479), (32, 55482), (35, 55539),

Gene: Winky_85 Start: 55471, Stop: 55857, Start Num: 10

Candidate Starts for Winky_85:

(Start: 10 @55471 has 73 MA's), (14, 55522), (16, 55543), (18, 55564), (22, 55603), (23, 55618), (25, 55636), (31, 55693), (32, 55696), (35, 55753),

Gene: Wyatt2_83 Start: 53860, Stop: 54243, Start Num: 10

Candidate Starts for Wyatt2_83:

(Start: 10 @53860 has 73 MA's), (18, 53953), (23, 54007), (25, 54025), (32, 54085), (35, 54142),

Gene: Zakai_86 Start: 55577, Stop: 55963, Start Num: 10

Candidate Starts for Zakai_86:

(Start: 10 @55577 has 73 MA's), (14, 55628), (16, 55649), (18, 55670), (22, 55709), (23, 55724), (25, 55742), (31, 55799), (32, 55802), (35, 55859),

Gene: Zaria_83 Start: 53312, Stop: 53695, Start Num: 10

Candidate Starts for Zaria_83:

(Start: 10 @53312 has 73 MA's), (18, 53405), (23, 53459), (25, 53477), (32, 53537), (35, 53594),

Gene: ZhongYanYuan_83 Start: 55291, Stop: 55689, Start Num: 10

Candidate Starts for ZhongYanYuan_83:

(Start: 10 @55291 has 73 MA's), (14, 55342), (16, 55363), (18, 55384), (22, 55423), (23, 55438), (25, 55456), (31, 55513), (32, 55516), (35, 55573), (43, 55609),