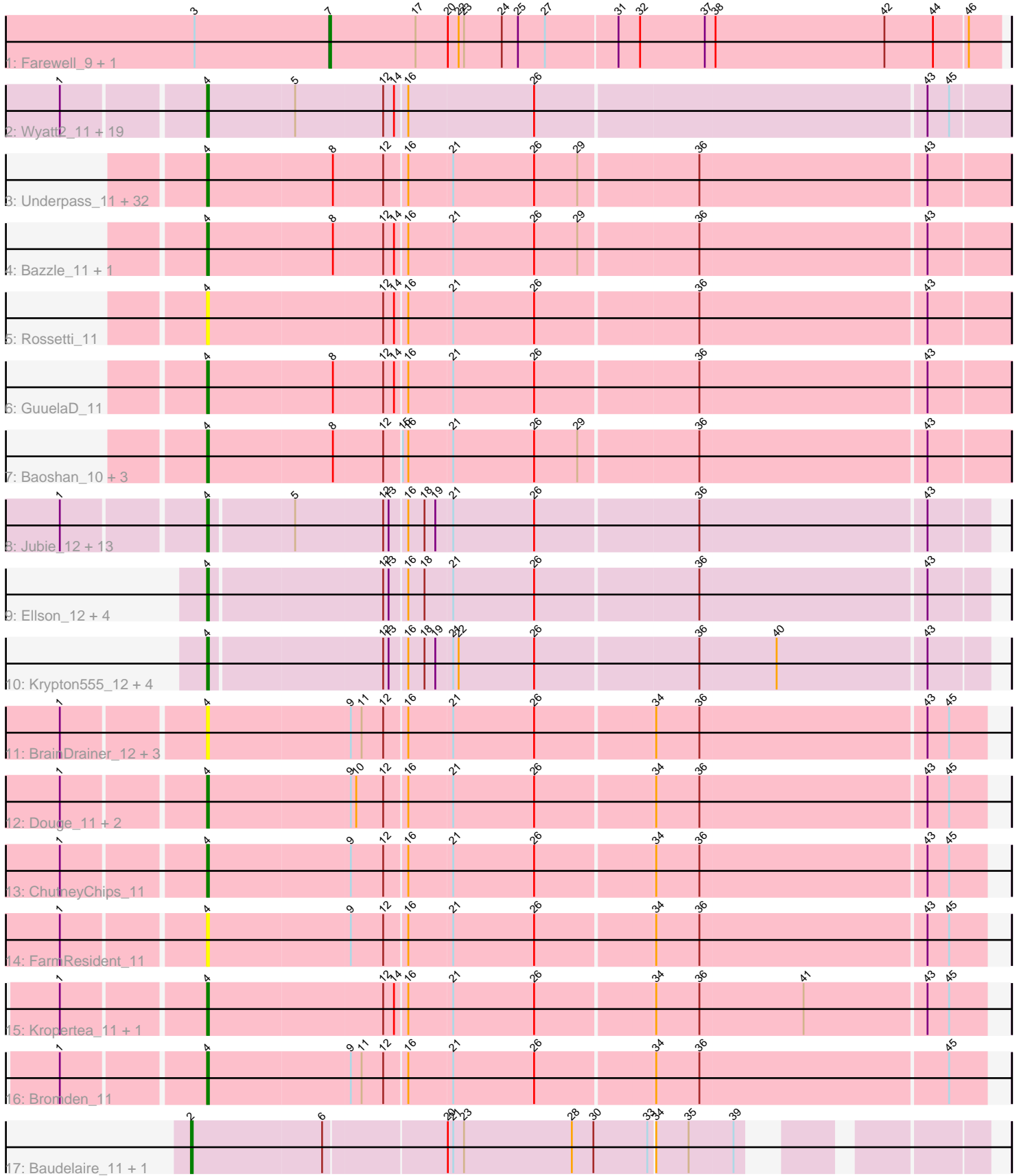


Pham 311423



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 311423 Report

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

Pham number 311423 has 101 members, 21 are drafts.

Phages represented in each track:

- Track 1 : Farewell_9, Sparky_9
- Track 2 : Wyatt2_11, Zaria_11, Silverleaf_11, Appletree2_11, AvadaKedavra_11, Acquire49_11, Tyson_11, LeBron_11, UPIE_11, CicholasNage_11, Rose5_11, Halena_11, Enceladus_11, MAckerman_11, JoeDirt_11, Poochiewood_11, DirkDirk_11, OhShagHennessy_11, Wamburgrxpress_11, Calm_11
- Track 3 : Underpass_11, BigCheese_11, DanBing_10, Loadrie_11, LilDestine_11, MkaliMitinis3_11, Faith1_11, Miley16_11, DrSeegs_11, Lewan_11, OverPar_11, Sarshaun_11, Wigglewiggle_11, Kahlid_11, Gabriela_11, Zakai_11, Hafay_11, Tourach_11, Vatrix_11, Soap141_11, Nicholasp3_11, Crossroads_11, SoJulia_11, Itos_11, Winky_11, Breezona_11, Finemlucis_11, BobsGarage_11, Lynnae_11, Rumpelstiltskin_11, Gardann_11, Wilder_11, Netyap_11
- Track 4 : Bazzle_11, Archie_11
- Track 5 : Rossetti_11
- Track 6 : GuuelaD_11
- Track 7 : Baoshan_10, DHan_11, Claus_11, ZhongYanYuan_10
- Track 8 : Jubie_12, Kingsolomon_12, TriFive_12, Finnry_12, Nicholas_12, Snenia_12, Moostard_12, MsGreen_12, Jobypre_12, Samty_12, Red305_12, Bellis_12, Clautastrophe_12, Lumos_12
- Track 9 : Ellson_12, KirDoubleO7_10, BourbonZero_11, LiyuLake_12, DuncansLeg_12
- Track 10 : Krypton555_12, MiniMac_12, Lolly9_12, MiniLon_12, Whirlwind_13
- Track 11 : BrainDrainer_12, Douzhi_11, Sheng711_11, PYPDinur_11
- Track 12 : Douge_11, Chaser_11, Quby_11
- Track 13 : ChutneyChips_11
- Track 14 : FarmResident_11
- Track 15 : Kropertea_11, DyoEdafos_12
- Track 16 : Bromden_11
- Track 17 : Baudelaire_11, Aegeus_11

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

The start number called the most often in the published annotations is 4, it was called in 76 of the 80 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Acquire49_11, Appletree2_11, Archie_11, AvadaKedavra_11, Baoshan_10, Bazzle_11, Bellis_12, BigCheese_11, BobsGarage_11, BourbonZero_11, BrainDrainer_12, Breezona_11, Bromden_11, Calm_11, Chaser_11, ChutneyChips_11, CicholasNage_11, Claus_11, Clautastrophe_12, Crossroads_11, DHan_11, DanBing_10, DirkDirk_11, Douge_11, Douzhi_11, DrSeegs_11, DuncansLeg_12, DyoEdafos_12, Ellson_12, Enceladus_11, Faith1_11, FarmResident_11, Finemlucis_11, Finnry_12, Gabriela_11, Gardann_11, GuuelaD_11, Hafay_11, Halena_11, Itos_11, Jobypre_12, JoeDirt_11, Jubie_12, Kahlid_11, Kingsolomon_12, KirDoubleO7_10, Kropertea_11, Krypton555_12, LeBron_11, Lewan_11, LilDestine_11, LiyuLake_12, Loadrie_11, Lolly9_12, Lumos_12, Lynnae_11, MAckerman_11, Miley16_11, MiniLon_12, MiniMac_12, MkaliMitinis3_11, Moostard_12, MsGreen_12, Netyap_11, Nicholas_12, Nicholasp3_11, OhShagHennessy_11, OverPar_11, PYPDinur_11, Poochiewood_11, Quby_11, Red305_12, Rose5_11, Rossetti_11, Rumpelstiltskin_11, Samty_12, Sarshaun_11, Sheng711_11, Silverleaf_11, Snenia_12, SoJulia_11, Soap141_11, Tourach_11, TriFive_12, Tyson_11, UPIE_11, Underpass_11, Vetrix_11, Wamburgexpress_11, Whirlwind_13, Wigglewiggle_11, Wilder_11, Winky_11, Wyatt2_11, Zakai_11, Zaria_11, ZhongYanYuan_10,

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

-

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

- Aegeus_11, Baudelaire_11, Farewell_9, Sparky_9,

Summary by start number:

Start 2:

- Found in 2 of 101 (2.0%) of genes in pham
- Manual Annotations of this start: 2 of 80
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aegeus_11 (L5), Baudelaire_11 (L5),

Start 4:

- Found in 97 of 101 (96.0%) of genes in pham
- Manual Annotations of this start: 76 of 80
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Acquire49_11 (L1), Appletree2_11 (L1), Archie_11 (L2), AvadaKedavra_11 (L1), Baoshan_10 (L2), Bazzle_11 (L2), Bellis_12 (L3), BigCheese_11 (L2), BobsGarage_11 (L2), BourbonZero_11 (L3), BrainDrainer_12 (L4), Breezona_11 (L2), Bromden_11 (L4), Calm_11 (L1), Chaser_11 (L4), ChutneyChips_11 (L4), CicholasNage_11 (L1), Claus_11 (L2), Clautastrophe_12 (L3), Crossroads_11 (L2), DHan_11 (L2), DanBing_10 (L2), DirkDirk_11 (L1), Douge_11 (L4), Douzhi_11 (L4), DrSeegs_11 (L2), DuncansLeg_12 (L3), DyoEdafos_12 (L4), Ellson_12 (L3), Enceladus_11 (L1), Faith1_11 (L2), FarmResident_11 (L4), Finemlucis_11 (L2), Finnry_12 (L3), Gabriela_11 (L2), Gardann_11 (L2), GuuelaD_11 (L2), Hafay_11 (L2), Halena_11 (L1), Itos_11 (L2), Jobypre_12 (L3), JoeDirt_11 (L1), Jubie_12 (L3), Kahlid_11 (L2), Kingsolomon_12 (L3), KirDoubleO7_10 (L3), Kropertea_11 (L4), Krypton555_12 (L3), LeBron_11 (L1), Lewan_11 (L2), LilDestine_11 (L2), LiyuLake_12 (L3), Loadrie_11 (L2), Lolly9_12 (L3), Lumos_12 (L3), Lynnae_11 (L2), MAckerman_11 (L1), Miley16_11 (L2), MiniLon_12 (L3), MiniMac_12 (L3), MkaliMitinis3_11 (L2), Moostard_12 (L3),

MsGreen_12 (L3), Netyap_11 (L2), Nicholas_12 (L3), Nicholasp3_11 (L2), OhShagHennessy_11 (L1), OverPar_11 (L2), PYPDinur_11 (L4), Poochiewood_11 (L1), Quby_11 (L4), Red305_12 (L3), Rose5_11 (L1), Rossetti_11 (L2), Rumpelstiltskin_11 (L2), Samty_12 (L3), Sarshaun_11 (L2), Sheng711_11 (L4), Silverleaf_11 (L1), Snenia_12 (L3), SoJulia_11 (L2), Soap141_11 (L2), Tourach_11 (L2), TriFive_12 (L3), Tyson_11 (L1), UPIE_11 (L1), Underpass_11 (L2), Vetrix_11 (L2), Wamburggrxpress_11 (L1), Whirlwind_13 (L3), Wigglewobble_11 (L2), Wilder_11 (L2), Winky_11 (L2), Wyatt2_11 (L1), Zakai_11 (L2), Zaria_11 (L1), ZhongYanYuan_10 (L2),

Start 7:

- Found in 2 of 101 (2.0%) of genes in pham
- Manual Annotations of this start: 2 of 80
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Farewell_9 (AF), Sparky_9 (AF),

Summary by clusters:

There are 6 clusters represented in this pham: AF, L4, L5, L2, L3, L1,

Info for manual annotations of cluster AF:

- Start number 7 was manually annotated 2 times for cluster AF.

Info for manual annotations of cluster L1:

- Start number 4 was manually annotated 19 times for cluster L1.

Info for manual annotations of cluster L2:

- Start number 4 was manually annotated 32 times for cluster L2.

Info for manual annotations of cluster L3:

- Start number 4 was manually annotated 19 times for cluster L3.

Info for manual annotations of cluster L4:

- Start number 4 was manually annotated 6 times for cluster L4.

Info for manual annotations of cluster L5:

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

Gene Information:

Gene: Acquire49_11 Start: 8033, Stop: 8464, Start Num: 4

Candidate Starts for Acquire49_11:

(1, 7958), (Start: 4 @8033 has 76 MA's), (5, 8081), (12, 8129), (14, 8135), (16, 8141), (26, 8210), (43, 8420), (45, 8432),

Gene: Aegeus_11 Start: 7688, Stop: 8083, Start Num: 2

Candidate Starts for Aegeus_11:

(Start: 2 @7688 has 2 MA's), (6, 7760), (20, 7823), (21, 7826), (23, 7832), (28, 7892), (30, 7904), (33, 7934), (34, 7937), (35, 7955), (39, 7979),

Gene: Appletree2_11 Start: 8007, Stop: 8438, Start Num: 4

Candidate Starts for Appletree2_11:

(1, 7932), (Start: 4 @8007 has 76 MA's), (5, 8055), (12, 8103), (14, 8109), (16, 8115), (26, 8184), (43, 8394), (45, 8406),

Gene: Archie_11 Start: 8003, Stop: 8434, Start Num: 4

Candidate Starts for Archie_11:

(Start: 4 @8003 has 76 MA's), (8, 8072), (12, 8099), (14, 8105), (16, 8111), (21, 8135), (26, 8180), (29, 8204), (36, 8267), (43, 8390),

Gene: AvadaKedavra_11 Start: 8033, Stop: 8464, Start Num: 4

Candidate Starts for AvadaKedavra_11:

(1, 7958), (Start: 4 @8033 has 76 MA's), (5, 8081), (12, 8129), (14, 8135), (16, 8141), (26, 8210), (43, 8420), (45, 8432),

Gene: Baoshan_10 Start: 7858, Stop: 8289, Start Num: 4

Candidate Starts for Baoshan_10:

(Start: 4 @7858 has 76 MA's), (8, 7927), (12, 7954), (15, 7963), (16, 7966), (21, 7990), (26, 8035), (29, 8059), (36, 8122), (43, 8245),

Gene: Baudelaire_11 Start: 7688, Stop: 8083, Start Num: 2

Candidate Starts for Baudelaire_11:

(Start: 2 @7688 has 2 MA's), (6, 7760), (20, 7823), (21, 7826), (23, 7832), (28, 7892), (30, 7904), (33, 7934), (34, 7937), (35, 7955), (39, 7979),

Gene: Bazzle_11 Start: 7979, Stop: 8410, Start Num: 4

Candidate Starts for Bazzle_11:

(Start: 4 @7979 has 76 MA's), (8, 8048), (12, 8075), (14, 8081), (16, 8087), (21, 8111), (26, 8156), (29, 8180), (36, 8243), (43, 8366),

Gene: Bellis_12 Start: 8178, Stop: 8594, Start Num: 4

Candidate Starts for Bellis_12:

(1, 8103), (Start: 4 @8178 has 76 MA's), (5, 8223), (12, 8271), (13, 8274), (16, 8283), (18, 8292), (19, 8298), (21, 8307), (26, 8352), (36, 8439), (43, 8562),

Gene: BigCheese_11 Start: 8030, Stop: 8461, Start Num: 4

Candidate Starts for BigCheese_11:

(Start: 4 @8030 has 76 MA's), (8, 8099), (12, 8126), (16, 8138), (21, 8162), (26, 8207), (29, 8231), (36, 8294), (43, 8417),

Gene: BobsGarage_11 Start: 8030, Stop: 8461, Start Num: 4

Candidate Starts for BobsGarage_11:

(Start: 4 @8030 has 76 MA's), (8, 8099), (12, 8126), (16, 8138), (21, 8162), (26, 8207), (29, 8231), (36, 8294), (43, 8417),

Gene: BourbonZero_11 Start: 8184, Stop: 8600, Start Num: 4

Candidate Starts for BourbonZero_11:

(Start: 4 @8184 has 76 MA's), (12, 8277), (13, 8280), (16, 8289), (18, 8298), (21, 8313), (26, 8358), (36, 8445), (43, 8568),

Gene: BrainDrainer_12 Start: 7849, Stop: 8268, Start Num: 4

Candidate Starts for BrainDrainer_12:

(1, 7774), (Start: 4 @7849 has 76 MA's), (9, 7927), (11, 7933), (12, 7945), (16, 7957), (21, 7981), (26, 8026), (34, 8089), (36, 8113), (43, 8236), (45, 8248),

Gene: Breezona_11 Start: 8030, Stop: 8461, Start Num: 4

Candidate Starts for Breezona_11:

(Start: 4 @8030 has 76 MA's), (8, 8099), (12, 8126), (16, 8138), (21, 8162), (26, 8207), (29, 8231), (36, 8294), (43, 8417),

Gene: Bromden_11 Start: 7759, Stop: 8178, Start Num: 4

Candidate Starts for Bromden_11:

(1, 7684), (Start: 4 @7759 has 76 MA's), (9, 7837), (11, 7843), (12, 7855), (16, 7867), (21, 7891), (26, 7936), (34, 7999), (36, 8023), (45, 8158),

Gene: Calm_11 Start: 8034, Stop: 8465, Start Num: 4

Candidate Starts for Calm_11:

(1, 7959), (Start: 4 @8034 has 76 MA's), (5, 8082), (12, 8130), (14, 8136), (16, 8142), (26, 8211), (43, 8421), (45, 8433),

Gene: Chaser_11 Start: 7764, Stop: 8183, Start Num: 4

Candidate Starts for Chaser_11:

(1, 7689), (Start: 4 @7764 has 76 MA's), (9, 7842), (10, 7845), (12, 7860), (16, 7872), (21, 7896), (26, 7941), (34, 8004), (36, 8028), (43, 8151), (45, 8163),

Gene: ChutneyChips_11 Start: 7752, Stop: 8171, Start Num: 4

Candidate Starts for ChutneyChips_11:

(1, 7677), (Start: 4 @7752 has 76 MA's), (9, 7830), (12, 7848), (16, 7860), (21, 7884), (26, 7929), (34, 7992), (36, 8016), (43, 8139), (45, 8151),

Gene: CicholasNage_11 Start: 8034, Stop: 8465, Start Num: 4

Candidate Starts for CicholasNage_11:

(1, 7959), (Start: 4 @8034 has 76 MA's), (5, 8082), (12, 8130), (14, 8136), (16, 8142), (26, 8211), (43, 8421), (45, 8433),

Gene: Claus_11 Start: 8038, Stop: 8469, Start Num: 4

Candidate Starts for Claus_11:

(Start: 4 @8038 has 76 MA's), (8, 8107), (12, 8134), (15, 8143), (16, 8146), (21, 8170), (26, 8215), (29, 8239), (36, 8302), (43, 8425),

Gene: Clautastrophe_12 Start: 8182, Stop: 8598, Start Num: 4

Candidate Starts for Clautastrophe_12:

(1, 8107), (Start: 4 @8182 has 76 MA's), (5, 8227), (12, 8275), (13, 8278), (16, 8287), (18, 8296), (19, 8302), (21, 8311), (26, 8356), (36, 8443), (43, 8566),

Gene: Crossroads_11 Start: 8030, Stop: 8461, Start Num: 4

Candidate Starts for Crossroads_11:

(Start: 4 @8030 has 76 MA's), (8, 8099), (12, 8126), (16, 8138), (21, 8162), (26, 8207), (29, 8231), (36, 8294), (43, 8417),

Gene: DHan_11 Start: 7974, Stop: 8405, Start Num: 4

Candidate Starts for DHan_11:

(Start: 4 @7974 has 76 MA's), (8, 8043), (12, 8070), (15, 8079), (16, 8082), (21, 8106), (26, 8151), (29, 8175), (36, 8238), (43, 8361),

Gene: DanBing_10 Start: 7857, Stop: 8288, Start Num: 4

Candidate Starts for DanBing_10:

(Start: 4 @7857 has 76 MA's), (8, 7926), (12, 7953), (16, 7965), (21, 7989), (26, 8034), (29, 8058), (36, 8121), (43, 8244),

Gene: DirkDirk_11 Start: 8035, Stop: 8466, Start Num: 4

Candidate Starts for DirkDirk_11:

(1, 7960), (Start: 4 @8035 has 76 MA's), (5, 8083), (12, 8131), (14, 8137), (16, 8143), (26, 8212), (43, 8422), (45, 8434),

Gene: Douge_11 Start: 7710, Stop: 8129, Start Num: 4

Candidate Starts for Douge_11:

(1, 7635), (Start: 4 @7710 has 76 MA's), (9, 7788), (10, 7791), (12, 7806), (16, 7818), (21, 7842), (26, 7887), (34, 7950), (36, 7974), (43, 8097), (45, 8109),

Gene: Douzhi_11 Start: 7710, Stop: 8129, Start Num: 4

Candidate Starts for Douzhi_11:

(1, 7635), (Start: 4 @7710 has 76 MA's), (9, 7788), (11, 7794), (12, 7806), (16, 7818), (21, 7842), (26, 7887), (34, 7950), (36, 7974), (43, 8097), (45, 8109),

Gene: DrSeegs_11 Start: 8030, Stop: 8461, Start Num: 4

Candidate Starts for DrSeegs_11:

(Start: 4 @8030 has 76 MA's), (8, 8099), (12, 8126), (16, 8138), (21, 8162), (26, 8207), (29, 8231), (36, 8294), (43, 8417),

Gene: DuncansLeg_12 Start: 8186, Stop: 8602, Start Num: 4

Candidate Starts for DuncansLeg_12:

(Start: 4 @8186 has 76 MA's), (12, 8279), (13, 8282), (16, 8291), (18, 8300), (21, 8315), (26, 8360), (36, 8447), (43, 8570),

Gene: DyoEdafos_12 Start: 7920, Stop: 8339, Start Num: 4

Candidate Starts for DyoEdafos_12:

(1, 7845), (Start: 4 @7920 has 76 MA's), (12, 8016), (14, 8022), (16, 8028), (21, 8052), (26, 8097), (34, 8160), (36, 8184), (41, 8241), (43, 8307), (45, 8319),

Gene: Ellson_12 Start: 8194, Stop: 8610, Start Num: 4

Candidate Starts for Ellson_12:

(Start: 4 @8194 has 76 MA's), (12, 8287), (13, 8290), (16, 8299), (18, 8308), (21, 8323), (26, 8368), (36, 8455), (43, 8578),

Gene: Enceladus_11 Start: 8035, Stop: 8466, Start Num: 4

Candidate Starts for Enceladus_11:

(1, 7960), (Start: 4 @8035 has 76 MA's), (5, 8083), (12, 8131), (14, 8137), (16, 8143), (26, 8212), (43, 8422), (45, 8434),

Gene: Faith1_11 Start: 8030, Stop: 8461, Start Num: 4

Candidate Starts for Faith1_11:

(Start: 4 @8030 has 76 MA's), (8, 8099), (12, 8126), (16, 8138), (21, 8162), (26, 8207), (29, 8231), (36, 8294), (43, 8417),

Gene: Farewell_9 Start: 7127, Stop: 7495, Start Num: 7

Candidate Starts for Farewell_9:

(3, 7052), (Start: 7 @7127 has 2 MA's), (17, 7175), (20, 7193), (22, 7199), (23, 7202), (24, 7223), (25, 7232), (27, 7247), (31, 7286), (32, 7298), (37, 7334), (38, 7340), (42, 7433), (44, 7460), (46, 7478),

Gene: FarmResident_11 Start: 7755, Stop: 8174, Start Num: 4

Candidate Starts for FarmResident_11:

(1, 7680), (Start: 4 @7755 has 76 MA's), (9, 7833), (12, 7851), (16, 7863), (21, 7887), (26, 7932), (34, 7995), (36, 8019), (43, 8142), (45, 8154),

Gene: Finemlucis_11 Start: 8030, Stop: 8461, Start Num: 4

Candidate Starts for Finemlucis_11:

(Start: 4 @8030 has 76 MA's), (8, 8099), (12, 8126), (16, 8138), (21, 8162), (26, 8207), (29, 8231), (36, 8294), (43, 8417),

Gene: Finnry_12 Start: 8179, Stop: 8595, Start Num: 4

Candidate Starts for Finnry_12:

(1, 8104), (Start: 4 @8179 has 76 MA's), (5, 8224), (12, 8272), (13, 8275), (16, 8284), (18, 8293), (19, 8299), (21, 8308), (26, 8353), (36, 8440), (43, 8563),

Gene: Gabriela_11 Start: 8030, Stop: 8461, Start Num: 4

Candidate Starts for Gabriela_11:

(Start: 4 @8030 has 76 MA's), (8, 8099), (12, 8126), (16, 8138), (21, 8162), (26, 8207), (29, 8231), (36, 8294), (43, 8417),

Gene: Gardann_11 Start: 8030, Stop: 8461, Start Num: 4

Candidate Starts for Gardann_11:

(Start: 4 @8030 has 76 MA's), (8, 8099), (12, 8126), (16, 8138), (21, 8162), (26, 8207), (29, 8231), (36, 8294), (43, 8417),

Gene: GuuelaD_11 Start: 8063, Stop: 8494, Start Num: 4

Candidate Starts for GuuelaD_11:

(Start: 4 @8063 has 76 MA's), (8, 8132), (12, 8159), (14, 8165), (16, 8171), (21, 8195), (26, 8240), (36, 8327), (43, 8450),

Gene: Hafay_11 Start: 8063, Stop: 8494, Start Num: 4

Candidate Starts for Hafay_11:

(Start: 4 @8063 has 76 MA's), (8, 8132), (12, 8159), (16, 8171), (21, 8195), (26, 8240), (29, 8264), (36, 8327), (43, 8450),

Gene: Halena_11 Start: 8034, Stop: 8465, Start Num: 4

Candidate Starts for Halena_11:

(1, 7959), (Start: 4 @8034 has 76 MA's), (5, 8082), (12, 8130), (14, 8136), (16, 8142), (26, 8211), (43, 8421), (45, 8433),

Gene: Itos_11 Start: 8030, Stop: 8461, Start Num: 4

Candidate Starts for Itos_11:

(Start: 4 @8030 has 76 MA's), (8, 8099), (12, 8126), (16, 8138), (21, 8162), (26, 8207), (29, 8231), (36, 8294), (43, 8417),

Gene: Jobypre_12 Start: 8182, Stop: 8598, Start Num: 4

Candidate Starts for Jobypre_12:

(1, 8107), (Start: 4 @8182 has 76 MA's), (5, 8227), (12, 8275), (13, 8278), (16, 8287), (18, 8296), (19, 8302), (21, 8311), (26, 8356), (36, 8443), (43, 8566),

Gene: JoeDirt_11 Start: 8034, Stop: 8465, Start Num: 4

Candidate Starts for JoeDirt_11:

(1, 7959), (Start: 4 @8034 has 76 MA's), (5, 8082), (12, 8130), (14, 8136), (16, 8142), (26, 8211), (43, 8421), (45, 8433),

Gene: Jubie_12 Start: 8182, Stop: 8598, Start Num: 4

Candidate Starts for Jubie_12:

(1, 8107), (Start: 4 @8182 has 76 MA's), (5, 8227), (12, 8275), (13, 8278), (16, 8287), (18, 8296), (19, 8302), (21, 8311), (26, 8356), (36, 8443), (43, 8566),

Gene: Kahlid_11 Start: 8030, Stop: 8461, Start Num: 4

Candidate Starts for Kahlid_11:

(Start: 4 @8030 has 76 MA's), (8, 8099), (12, 8126), (16, 8138), (21, 8162), (26, 8207), (29, 8231), (36, 8294), (43, 8417),

Gene: Kingsolomon_12 Start: 8182, Stop: 8598, Start Num: 4

Candidate Starts for Kingsolomon_12:

(1, 8107), (Start: 4 @8182 has 76 MA's), (5, 8227), (12, 8275), (13, 8278), (16, 8287), (18, 8296), (19, 8302), (21, 8311), (26, 8356), (36, 8443), (43, 8566),

Gene: KirDoubleO7_10 Start: 8195, Stop: 8611, Start Num: 4

Candidate Starts for KirDoubleO7_10:

(Start: 4 @8195 has 76 MA's), (12, 8288), (13, 8291), (16, 8300), (18, 8309), (21, 8324), (26, 8369), (36, 8456), (43, 8579),

Gene: Kropertea_11 Start: 7726, Stop: 8145, Start Num: 4

Candidate Starts for Kropertea_11:

(1, 7651), (Start: 4 @7726 has 76 MA's), (12, 7822), (14, 7828), (16, 7834), (21, 7858), (26, 7903), (34, 7966), (36, 7990), (41, 8047), (43, 8113), (45, 8125),

Gene: Krypton555_12 Start: 8171, Stop: 8587, Start Num: 4

Candidate Starts for Krypton555_12:

(Start: 4 @8171 has 76 MA's), (12, 8264), (13, 8267), (16, 8276), (18, 8285), (19, 8291), (21, 8300), (22, 8303), (26, 8345), (36, 8432), (40, 8474), (43, 8555),

Gene: LeBron_11 Start: 8034, Stop: 8465, Start Num: 4

Candidate Starts for LeBron_11:

(1, 7959), (Start: 4 @8034 has 76 MA's), (5, 8082), (12, 8130), (14, 8136), (16, 8142), (26, 8211), (43, 8421), (45, 8433),

Gene: Lewan_11 Start: 8030, Stop: 8461, Start Num: 4

Candidate Starts for Lewan_11:

(Start: 4 @8030 has 76 MA's), (8, 8099), (12, 8126), (16, 8138), (21, 8162), (26, 8207), (29, 8231), (36, 8294), (43, 8417),

Gene: LilDestine_11 Start: 8030, Stop: 8461, Start Num: 4

Candidate Starts for LilDestine_11:

(Start: 4 @8030 has 76 MA's), (8, 8099), (12, 8126), (16, 8138), (21, 8162), (26, 8207), (29, 8231), (36, 8294), (43, 8417),

Gene: LiyuLake_12 Start: 8186, Stop: 8602, Start Num: 4

Candidate Starts for LiyuLake_12:

(Start: 4 @8186 has 76 MA's), (12, 8279), (13, 8282), (16, 8291), (18, 8300), (21, 8315), (26, 8360), (36, 8447), (43, 8570),

Gene: Loadrie_11 Start: 8063, Stop: 8494, Start Num: 4

Candidate Starts for Loadrie_11:

(Start: 4 @8063 has 76 MA's), (8, 8132), (12, 8159), (16, 8171), (21, 8195), (26, 8240), (29, 8264), (36, 8327), (43, 8450),

Gene: Lolly9_12 Start: 8189, Stop: 8605, Start Num: 4

Candidate Starts for Lolly9_12:

(Start: 4 @8189 has 76 MA's), (12, 8282), (13, 8285), (16, 8294), (18, 8303), (19, 8309), (21, 8318), (22, 8321), (26, 8363), (36, 8450), (40, 8492), (43, 8573),

Gene: Lumos_12 Start: 8182, Stop: 8598, Start Num: 4

Candidate Starts for Lumos_12:

(1, 8107), (Start: 4 @8182 has 76 MA's), (5, 8227), (12, 8275), (13, 8278), (16, 8287), (18, 8296), (19, 8302), (21, 8311), (26, 8356), (36, 8443), (43, 8566),

Gene: Lynnae_11 Start: 8030, Stop: 8461, Start Num: 4

Candidate Starts for Lynnae_11:

(Start: 4 @8030 has 76 MA's), (8, 8099), (12, 8126), (16, 8138), (21, 8162), (26, 8207), (29, 8231), (36, 8294), (43, 8417),

Gene: MAckerman_11 Start: 8033, Stop: 8464, Start Num: 4

Candidate Starts for MAckerman_11:

(1, 7958), (Start: 4 @8033 has 76 MA's), (5, 8081), (12, 8129), (14, 8135), (16, 8141), (26, 8210), (43, 8420), (45, 8432),

Gene: Miley16_11 Start: 8030, Stop: 8461, Start Num: 4

Candidate Starts for Miley16_11:

(Start: 4 @8030 has 76 MA's), (8, 8099), (12, 8126), (16, 8138), (21, 8162), (26, 8207), (29, 8231), (36, 8294), (43, 8417),

Gene: MiniLon_12 Start: 8189, Stop: 8605, Start Num: 4

Candidate Starts for MiniLon_12:

(Start: 4 @8189 has 76 MA's), (12, 8282), (13, 8285), (16, 8294), (18, 8303), (19, 8309), (21, 8318), (22, 8321), (26, 8363), (36, 8450), (40, 8492), (43, 8573),

Gene: MiniMac_12 Start: 8190, Stop: 8606, Start Num: 4

Candidate Starts for MiniMac_12:

(Start: 4 @8190 has 76 MA's), (12, 8283), (13, 8286), (16, 8295), (18, 8304), (19, 8310), (21, 8319), (22, 8322), (26, 8364), (36, 8451), (40, 8493), (43, 8574),

Gene: MkaliMitinis3_11 Start: 8030, Stop: 8461, Start Num: 4

Candidate Starts for MkaliMitinis3_11:

(Start: 4 @8030 has 76 MA's), (8, 8099), (12, 8126), (16, 8138), (21, 8162), (26, 8207), (29, 8231), (36, 8294), (43, 8417),

Gene: Moostard_12 Start: 8178, Stop: 8594, Start Num: 4

Candidate Starts for Moostard_12:

(1, 8103), (Start: 4 @8178 has 76 MA's), (5, 8223), (12, 8271), (13, 8274), (16, 8283), (18, 8292), (19, 8298), (21, 8307), (26, 8352), (36, 8439), (43, 8562),

Gene: MsGreen_12 Start: 8182, Stop: 8598, Start Num: 4

Candidate Starts for MsGreen_12:

(1, 8107), (Start: 4 @8182 has 76 MA's), (5, 8227), (12, 8275), (13, 8278), (16, 8287), (18, 8296), (19, 8302), (21, 8311), (26, 8356), (36, 8443), (43, 8566),

Gene: Netyap_11 Start: 8030, Stop: 8461, Start Num: 4

Candidate Starts for Netyap_11:

(Start: 4 @8030 has 76 MA's), (8, 8099), (12, 8126), (16, 8138), (21, 8162), (26, 8207), (29, 8231), (36, 8294), (43, 8417),

Gene: Nicholas_12 Start: 8182, Stop: 8598, Start Num: 4

Candidate Starts for Nicholas_12:

(1, 8107), (Start: 4 @8182 has 76 MA's), (5, 8227), (12, 8275), (13, 8278), (16, 8287), (18, 8296), (19, 8302), (21, 8311), (26, 8356), (36, 8443), (43, 8566),

Gene: Nicholasp3_11 Start: 8030, Stop: 8461, Start Num: 4

Candidate Starts for Nicholasp3_11:

(Start: 4 @8030 has 76 MA's), (8, 8099), (12, 8126), (16, 8138), (21, 8162), (26, 8207), (29, 8231), (36, 8294), (43, 8417),

Gene: OhShagHennessy_11 Start: 8007, Stop: 8438, Start Num: 4

Candidate Starts for OhShagHennessy_11:

(1, 7932), (Start: 4 @8007 has 76 MA's), (5, 8055), (12, 8103), (14, 8109), (16, 8115), (26, 8184), (43, 8394), (45, 8406),

Gene: OverPar_11 Start: 8063, Stop: 8494, Start Num: 4

Candidate Starts for OverPar_11:

(Start: 4 @8063 has 76 MA's), (8, 8132), (12, 8159), (16, 8171), (21, 8195), (26, 8240), (29, 8264), (36, 8327), (43, 8450),

Gene: PYPDinur_11 Start: 7710, Stop: 8129, Start Num: 4

Candidate Starts for PYPDinur_11:

(1, 7635), (Start: 4 @7710 has 76 MA's), (9, 7788), (11, 7794), (12, 7806), (16, 7818), (21, 7842), (26, 7887), (34, 7950), (36, 7974), (43, 8097), (45, 8109),

Gene: Poochiewood_11 Start: 8033, Stop: 8464, Start Num: 4

Candidate Starts for Poochiewood_11:

(1, 7958), (Start: 4 @8033 has 76 MA's), (5, 8081), (12, 8129), (14, 8135), (16, 8141), (26, 8210), (43, 8420), (45, 8432),

Gene: Quby_11 Start: 7709, Stop: 8128, Start Num: 4

Candidate Starts for Quby_11:

(1, 7634), (Start: 4 @7709 has 76 MA's), (9, 7787), (10, 7790), (12, 7805), (16, 7817), (21, 7841), (26, 7886), (34, 7949), (36, 7973), (43, 8096), (45, 8108),

Gene: Red305_12 Start: 8182, Stop: 8598, Start Num: 4

Candidate Starts for Red305_12:

(1, 8107), (Start: 4 @8182 has 76 MA's), (5, 8227), (12, 8275), (13, 8278), (16, 8287), (18, 8296), (19, 8302), (21, 8311), (26, 8356), (36, 8443), (43, 8566),

Gene: Rose5_11 Start: 8033, Stop: 8464, Start Num: 4

Candidate Starts for Rose5_11:

(1, 7958), (Start: 4 @8033 has 76 MA's), (5, 8081), (12, 8129), (14, 8135), (16, 8141), (26, 8210), (43, 8420), (45, 8432),

Gene: Rossetti_11 Start: 8030, Stop: 8461, Start Num: 4

Candidate Starts for Rossetti_11:

(Start: 4 @8030 has 76 MA's), (12, 8126), (14, 8132), (16, 8138), (21, 8162), (26, 8207), (36, 8294), (43, 8417),

Gene: Rumpelstiltskin_11 Start: 8030, Stop: 8461, Start Num: 4

Candidate Starts for Rumpelstiltskin_11:

(Start: 4 @8030 has 76 MA's), (8, 8099), (12, 8126), (16, 8138), (21, 8162), (26, 8207), (29, 8231), (36, 8294), (43, 8417),

Gene: Samty_12 Start: 8178, Stop: 8594, Start Num: 4

Candidate Starts for Samty_12:

(1, 8103), (Start: 4 @8178 has 76 MA's), (5, 8223), (12, 8271), (13, 8274), (16, 8283), (18, 8292), (19, 8298), (21, 8307), (26, 8352), (36, 8439), (43, 8562),

Gene: Sarshaun_11 Start: 8063, Stop: 8494, Start Num: 4

Candidate Starts for Sarshaun_11:

(Start: 4 @8063 has 76 MA's), (8, 8132), (12, 8159), (16, 8171), (21, 8195), (26, 8240), (29, 8264), (36, 8327), (43, 8450),

Gene: Sheng711_11 Start: 7710, Stop: 8129, Start Num: 4

Candidate Starts for Sheng711_11:

(1, 7635), (Start: 4 @7710 has 76 MA's), (9, 7788), (11, 7794), (12, 7806), (16, 7818), (21, 7842), (26, 7887), (34, 7950), (36, 7974), (43, 8097), (45, 8109),

Gene: Silverleaf_11 Start: 8033, Stop: 8464, Start Num: 4

Candidate Starts for Silverleaf_11:

(1, 7958), (Start: 4 @8033 has 76 MA's), (5, 8081), (12, 8129), (14, 8135), (16, 8141), (26, 8210), (43, 8420), (45, 8432),

Gene: Snenia_12 Start: 8183, Stop: 8599, Start Num: 4

Candidate Starts for Snenia_12:

(1, 8108), (Start: 4 @8183 has 76 MA's), (5, 8228), (12, 8276), (13, 8279), (16, 8288), (18, 8297), (19, 8303), (21, 8312), (26, 8357), (36, 8444), (43, 8567),

Gene: SoJulia_11 Start: 8030, Stop: 8461, Start Num: 4

Candidate Starts for SoJulia_11:

(Start: 4 @8030 has 76 MA's), (8, 8099), (12, 8126), (16, 8138), (21, 8162), (26, 8207), (29, 8231), (36, 8294), (43, 8417),

Gene: Soap141_11 Start: 8063, Stop: 8494, Start Num: 4

Candidate Starts for Soap141_11:

(Start: 4 @8063 has 76 MA's), (8, 8132), (12, 8159), (16, 8171), (21, 8195), (26, 8240), (29, 8264), (36, 8327), (43, 8450),

Gene: Sparky_9 Start: 7128, Stop: 7496, Start Num: 7

Candidate Starts for Sparky_9:

(3, 7053), (Start: 7 @7128 has 2 MA's), (17, 7176), (20, 7194), (22, 7200), (23, 7203), (24, 7224), (25, 7233), (27, 7248), (31, 7287), (32, 7299), (37, 7335), (38, 7341), (42, 7434), (44, 7461), (46, 7479),

Gene: Tourach_11 Start: 8043, Stop: 8474, Start Num: 4

Candidate Starts for Tourach_11:

(Start: 4 @8043 has 76 MA's), (8, 8112), (12, 8139), (16, 8151), (21, 8175), (26, 8220), (29, 8244), (36, 8307), (43, 8430),

Gene: TriFive_12 Start: 8182, Stop: 8598, Start Num: 4
Candidate Starts for TriFive_12:

(1, 8107), (Start: 4 @8182 has 76 MA's), (5, 8227), (12, 8275), (13, 8278), (16, 8287), (18, 8296), (19, 8302), (21, 8311), (26, 8356), (36, 8443), (43, 8566),

Gene: Tyson_11 Start: 8033, Stop: 8464, Start Num: 4
Candidate Starts for Tyson_11:

(1, 7958), (Start: 4 @8033 has 76 MA's), (5, 8081), (12, 8129), (14, 8135), (16, 8141), (26, 8210), (43, 8420), (45, 8432),

Gene: UPIE_11 Start: 8031, Stop: 8462, Start Num: 4
Candidate Starts for UPIE_11:

(1, 7956), (Start: 4 @8031 has 76 MA's), (5, 8079), (12, 8127), (14, 8133), (16, 8139), (26, 8208), (43, 8418), (45, 8430),

Gene: Underpass_11 Start: 8030, Stop: 8461, Start Num: 4
Candidate Starts for Underpass_11:

(Start: 4 @8030 has 76 MA's), (8, 8099), (12, 8126), (16, 8138), (21, 8162), (26, 8207), (29, 8231), (36, 8294), (43, 8417),

Gene: Vetrix_11 Start: 8030, Stop: 8461, Start Num: 4
Candidate Starts for Vetrix_11:

(Start: 4 @8030 has 76 MA's), (8, 8099), (12, 8126), (16, 8138), (21, 8162), (26, 8207), (29, 8231), (36, 8294), (43, 8417),

Gene: Wamburgexpress_11 Start: 8033, Stop: 8464, Start Num: 4
Candidate Starts for Wamburgexpress_11:

(1, 7958), (Start: 4 @8033 has 76 MA's), (5, 8081), (12, 8129), (14, 8135), (16, 8141), (26, 8210), (43, 8420), (45, 8432),

Gene: Whirlwind_13 Start: 8176, Stop: 8592, Start Num: 4
Candidate Starts for Whirlwind_13:

(Start: 4 @8176 has 76 MA's), (12, 8269), (13, 8272), (16, 8281), (18, 8290), (19, 8296), (21, 8305), (22, 8308), (26, 8350), (36, 8437), (40, 8479), (43, 8560),

Gene: Wigglewobble_11 Start: 8063, Stop: 8494, Start Num: 4
Candidate Starts for Wigglewobble_11:

(Start: 4 @8063 has 76 MA's), (8, 8132), (12, 8159), (16, 8171), (21, 8195), (26, 8240), (29, 8264), (36, 8327), (43, 8450),

Gene: Wilder_11 Start: 8030, Stop: 8461, Start Num: 4
Candidate Starts for Wilder_11:

(Start: 4 @8030 has 76 MA's), (8, 8099), (12, 8126), (16, 8138), (21, 8162), (26, 8207), (29, 8231), (36, 8294), (43, 8417),

Gene: Winky_11 Start: 8030, Stop: 8461, Start Num: 4
Candidate Starts for Winky_11:

(Start: 4 @8030 has 76 MA's), (8, 8099), (12, 8126), (16, 8138), (21, 8162), (26, 8207), (29, 8231), (36, 8294), (43, 8417),

Gene: Wyatt2_11 Start: 8033, Stop: 8464, Start Num: 4

Candidate Starts for Wyatt2_11:

(1, 7958), (Start: 4 @8033 has 76 MA's), (5, 8081), (12, 8129), (14, 8135), (16, 8141), (26, 8210), (43, 8420), (45, 8432),

Gene: Zakai_11 Start: 8018, Stop: 8449, Start Num: 4

Candidate Starts for Zakai_11:

(Start: 4 @8018 has 76 MA's), (8, 8087), (12, 8114), (16, 8126), (21, 8150), (26, 8195), (29, 8219), (36, 8282), (43, 8405),

Gene: Zaria_11 Start: 8034, Stop: 8465, Start Num: 4

Candidate Starts for Zaria_11:

(1, 7959), (Start: 4 @8034 has 76 MA's), (5, 8082), (12, 8130), (14, 8136), (16, 8142), (26, 8211), (43, 8421), (45, 8433),

Gene: ZhongYanYuan_10 Start: 7858, Stop: 8289, Start Num: 4

Candidate Starts for ZhongYanYuan_10:

(Start: 4 @7858 has 76 MA's), (8, 7927), (12, 7954), (15, 7963), (16, 7966), (21, 7990), (26, 8035), (29, 8059), (36, 8122), (43, 8245),