Supplemental data

Supplemental Table 1

	Forward primers	Reverse primers
Del 280-313	5′-AAGGGCAATTCTGCAGATATCC-3′	5′-GGAGGGATGAGCCGTCTGTAG-3′
Del 258-313	5′-AAGGGCAATTCTGCAGATATCC-3′	5′-ATAAGAGCCCCAGAGCAAGAA-3′
Del 217-313	5′-AAGGGCAATTCTGCAGATATCC-3′	5′-GAGGACAGCGTTGAGAAGGAG-3′
Del 166-313	5′-AAGGGCAATTCTGCAGATATCC-3′	5′-GAGCCCGTGAGCTTGATTAG-3′
Del 166-195	5′-GGCCATGGAGATTTATCTGG-3′	5′-GCCCGTGAGCTTGATTAG-3′
Del 133-176	5′-GCCCAGTTTGGAGAACATTT-3′	5′-TGTGGGGGTGGATAAACAGT-3′
Del 101-146	5′-AGGTTGTCATCCTGGGACAG-3′	5′-GCTTCTTCCAGCTCTCTCCA-3′
Del 72-104	5′-GGAGTTCGGGAAACCGTATT-3′	5′-AACTGCTCGGCACTCAGC-3′
Del 44- 72	5′-CCGGATCCAGAGGAACAAG-3′	5′-GCATCTCCGCTTTCCTCAG-3′
Del 14- 44	5′-CCATCCCAGCCAAGAAGG-3′	5′-TGGGGGAGAAAAAGGAGTAGA-3′
Del 3- 33	5′-CTGGGGTGCCTGAGGAAA-3′	5′-CGATCATCCTGGAGCTGAG-3′

Supplemental Figure 1. Ugene mRNA expression in normal and cancer cell lines

The upper panel shows the Northern blot analysis of Ugene expression in four normal colon epithelium samples (NC-1, -2, -3, and -4) versus 12 colon cancer cell lines. The lower panel shows the ethidium bromide staining of 28S and 18S ribosomal RNA subunits for each of the corresponding samples.

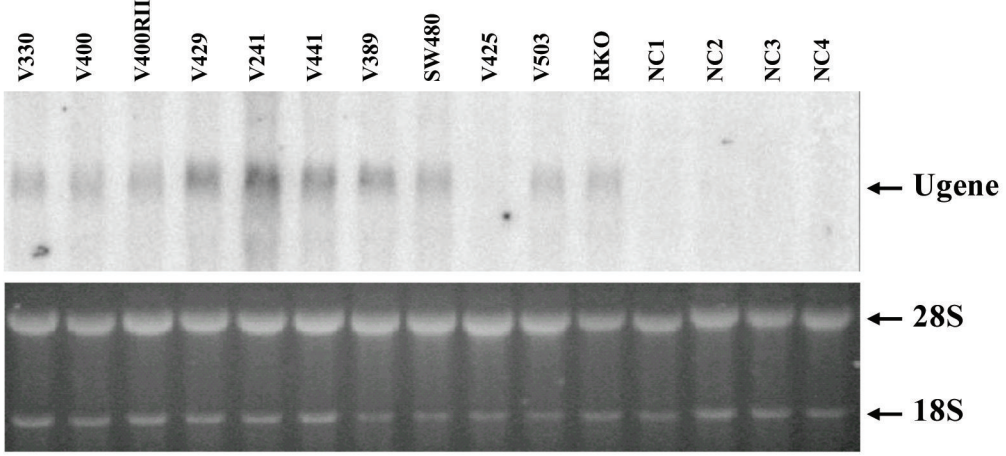
Supplemental Figure 2. UNG2 localization in DLD1 cells with and without presence of Ugene-p

DLD/Ugene-p-3xFLAG/1-25-UNG2-GFP cells (see legend of figure 4C) were transfected with plasmids expressing V5-epitope-tagged UNG2. Immunofluorescence against V5 epitope (green) was applied to the tranfected cells without (dox -) and with (dox +) expression of the 1-25-UNG2-GFP decoy protein, to detect subcellular localization of UNG2.

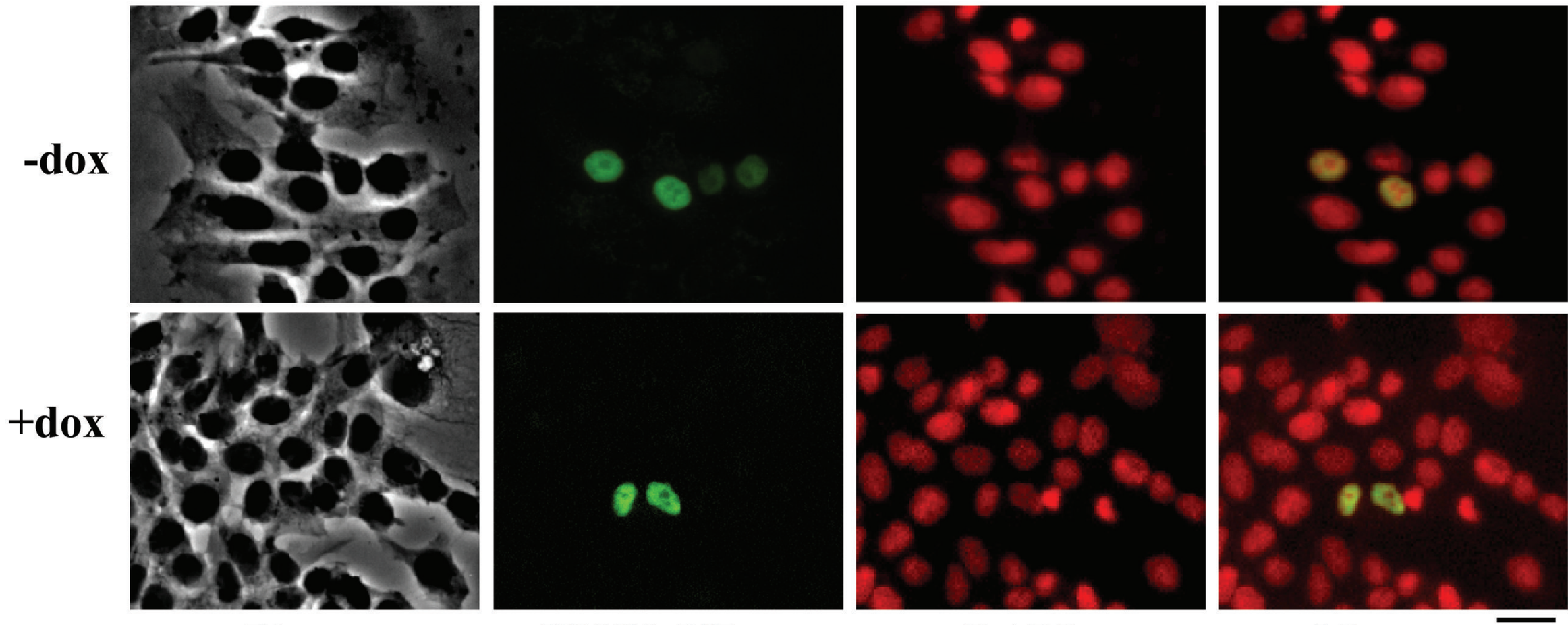
Supplemental Figure 3. Western analysis of UNG in UNG1 null and UNG null cells

Supplemental Figure 4. Analysis of Ugene expression in 3xFLAG epitope knockin cells. A) Shown is real-time PCR assay of total Ugene transcript expression in DLD1

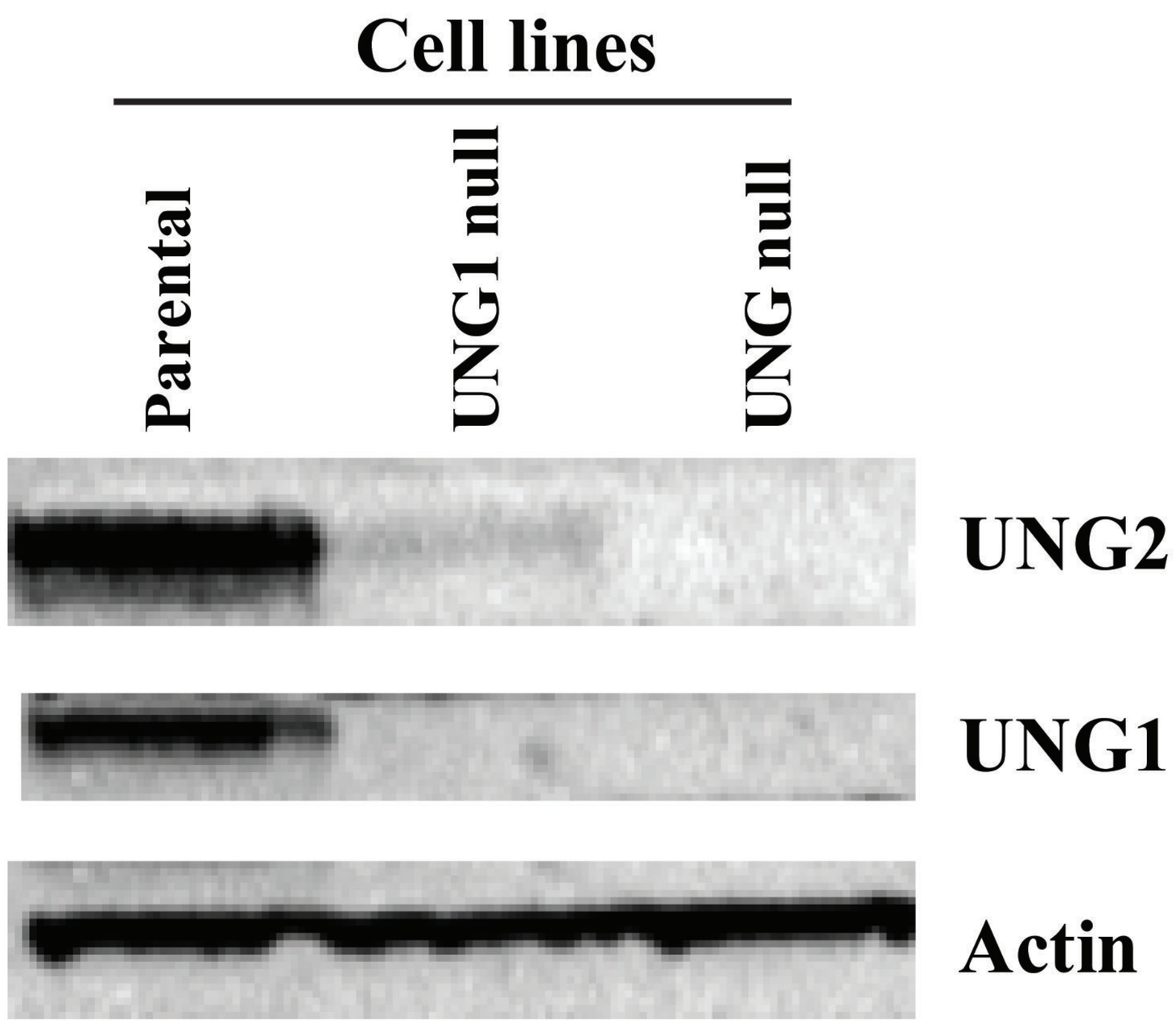
parental cells compared to DLD1 cells in which one Ugene-P allele bears a knocked in 3xFLAG epitope tag. **B)** PCR comparison of expression of 3xFLAG tagged versus untagged Ugene alleles. Radio-labeled RT-PCR was performed with primers that flank the 3xFLAG epitope tag allowing amplification of a short band corresponding to mRNA from the three untagged Ugene alleles (2 Ugene-q and one Ugene-p) (band labeled Ugene), and amplification of a larger band corresponding to mRNA from the 3xFLAG knockin allele (Ugene-p-3xFLAG). Quantitation of the incorporated radiolabel in each band (corrected for the molecular weight of the band) showed a molar ratio of 0.27:1 for the 3xFLAG allele versus the summed untagged Ugene alleles, equivalent to a ratio of 0.8:1 for expression of the 3xFLAG allele versus an individual Ugene allele. Accordingly, introduction of the 3xFLAG tag essentially makes no change in expression of either total Ugene transcript or of transcript arising from the tagged allele. cDNA was synthesized using Superscript III (Invitrogen). Semi-quantitative PCR reactions (20 cycles; linear conditions) were carried out in the presence of alpha ^{32}P- dCTP, analyzed on nondenaturing 6% acrylamide gels and quantified using a PhosphorImager. The PCR condition was: initial denaturing, 94ºC, 2min, followed by 20 cycles of 94ºC 30s; 58ºC, 30s; 72ºC, 45s; final extension, 72ºC, 7min. Primers were as follows: forward 5′-CTG TCT TCT TTC CTG CAA CAA C-3′ and reverse 5'- CAA ATG CCC CAT TTT TGT TT- 3'.


V330
V400
V400RII
V429
V241
V441
V389
SW480
V425
V503
RKO
NC1
NC2
NC3
NC4
← Ugene
← 28S
← 18S

Supplemental Figure 2

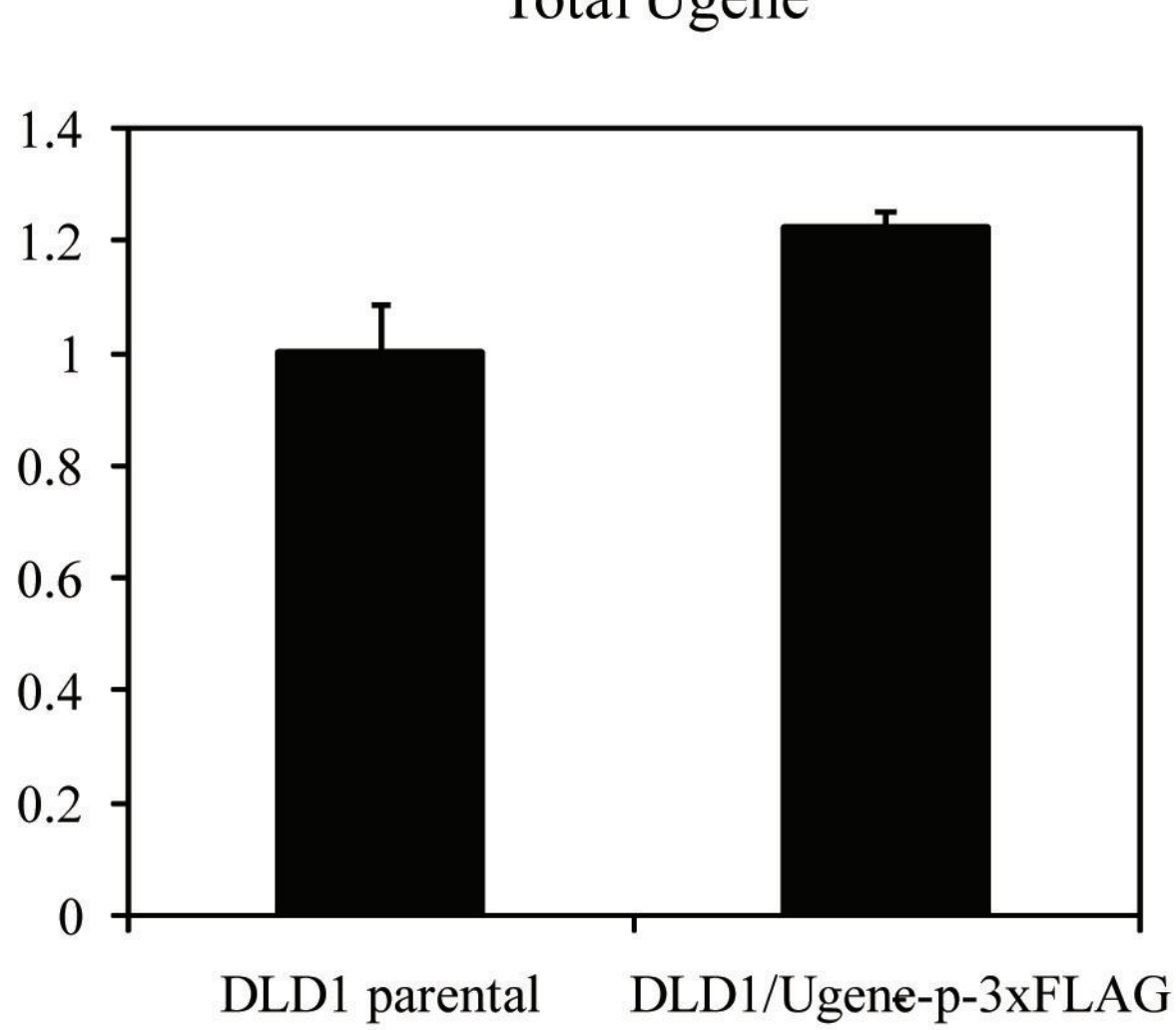


Supplemental Figure 3



Supplemental Figure 4

A



B