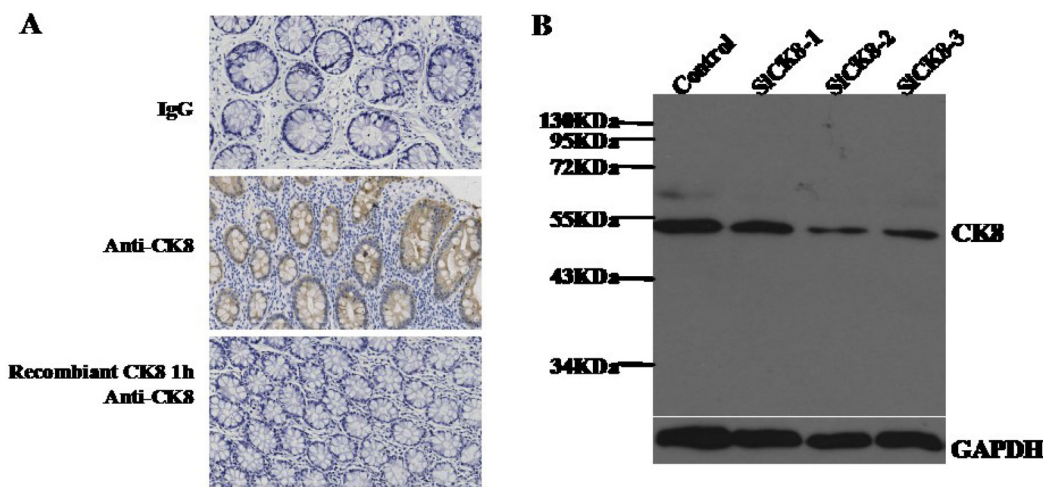
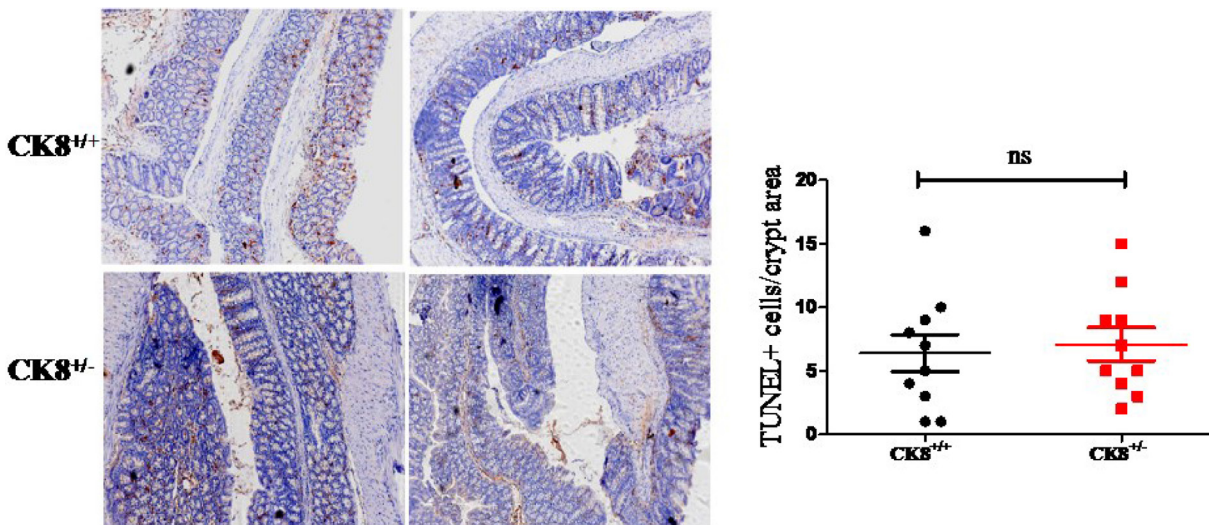


# Keratin 8 reduces colonic permeability and maintains gut microbiota homeostasis, protecting against colitis and colitis-associated tumorigenesis

## Supplementary Materials



**Supplementary Figure 1: The validation of the specificity of CK8 antibody.** (A) Immunohistochemical staining for colon cancer specimens incubated with IgG or CK8-specific antibody. To validate the specificity, monoclonal antibody to CK8 was pre-incubated with recombinant CK8 protein for 1 h prior to applying to tissue. (B) HT29 cells were transfected with control or CK8 siRNA, and the expression of CK8 was investigated with Western blot analysis.



**Supplementary Figure 2: The apoptosis analysis in CK8<sup>+/-</sup> and CK8<sup>+/+</sup> colons with tumors.** CK8<sup>+/+</sup> mice and CK8<sup>+/-</sup> mice were treated with AOM/DSS as Material and Methods described. The apoptosis in colons were measured using TUNEL assay.

**Supplementary Table 1: Real-time quantitative PCR primers**

β-catenin	Forward primer:ATGGAGCCGGACAGAAAAGC
	Reverse primer:CTTGCCACTCAGGGAAGGA
E-cadherin	Forward primer:CAGGTCTCCTCATGGCTTTGC
	Reverse primer:CTTCCGAAAAGAAGGCTGTCC
MMP2	Forward primer:CAAGTTCCCCGGCGATGTC
	Reverse primer:TTCTGGTCAAGGTCACCTGTC
MMP9	Forward primer:CTGGACAGCCAGACACTAAAG
	Reverse primer:CTCGCGGCAAGTCTTCAGAG
TNFα	Forward primer:CCTCTCTCTAATCAGCCCTCTG
	Reverse primer:GAGGACCTGGGAGTAGATGAG
IL-1α	Forward primer:GTGTTGCTGAAGGAGTTGCC
	Reverse primer:CGACTTTGTTCTTTGGTGGC
IL-1β	Forward primer:GCTTCAGGCAGGCAGTA
	Reverse primer:TGAGTCACAGAGGATGGG
IFNγ	Forward primer:TCGGTAACTGACTTGAATGTCCA
	Reverse primer:TCGCTTCCCTGTTTTAGCTGC
IL-4	Forward primer:GGTCTCAACCCCCAGCTAGT
	Reverse primer:GCCGATGATCTCTCTCAAGTGAT
IL-17	Forward primer:TTAACTCCCTTGGCGCAAAA
	Reverse primer:CTTCCCTCCGCATTGACAC
CCL4	Forward primer:TTCCTGCTGTTTCTCTTACACCT
	Reverse primer:CTGTCTGCCTCTTTTGGTCAG
iNOS	Forward primer:ACATCGACCCGTCCACAGTAT
	Reverse primer:CAGAGGGGTAGGCTTGTCTC
KC	Forward primer:CTGGGATTCACCTCAAGAACATC
	Reverse primer:CAGGGTCAAGGCAAGCCTC

**Supplementary Table 2: Relative contribution in the gut microbiota of CK8<sup>+/-</sup> and CK8<sup>+/+</sup> CRC mice. See Supplementary\_Table\_2**