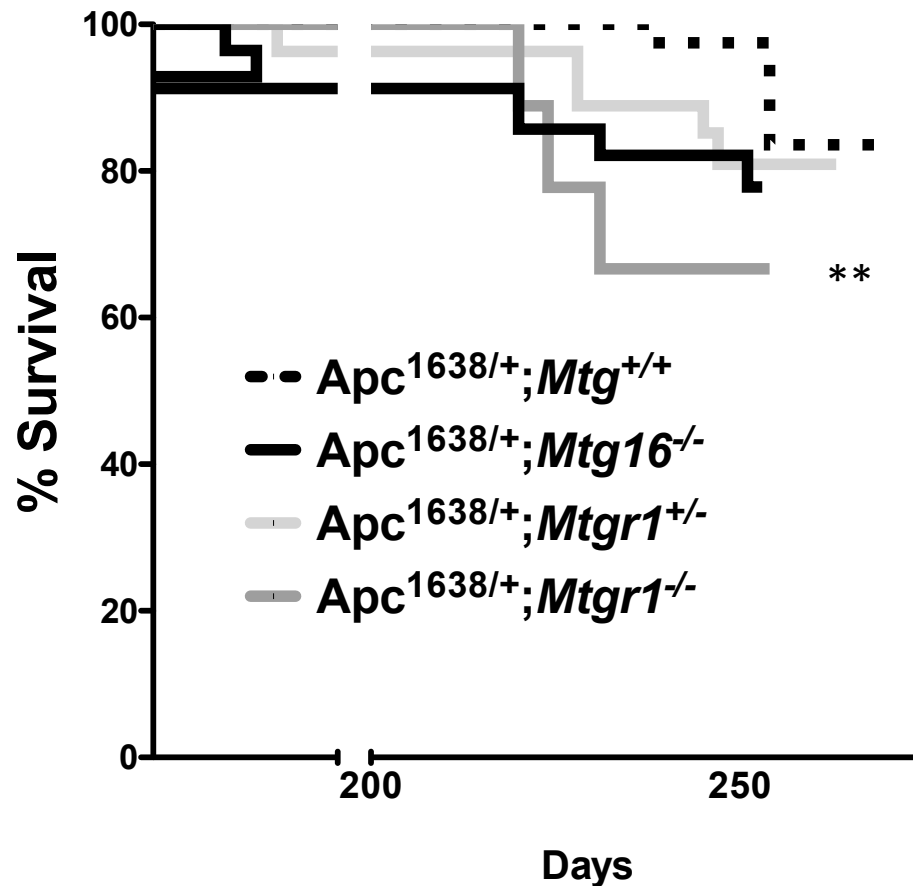
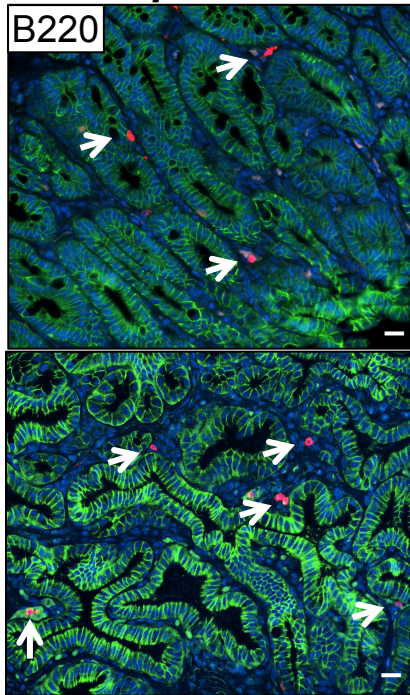
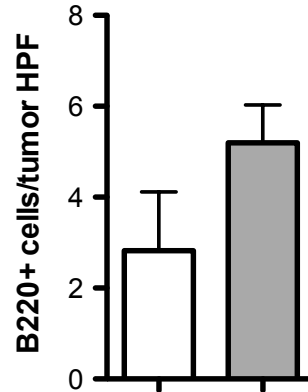


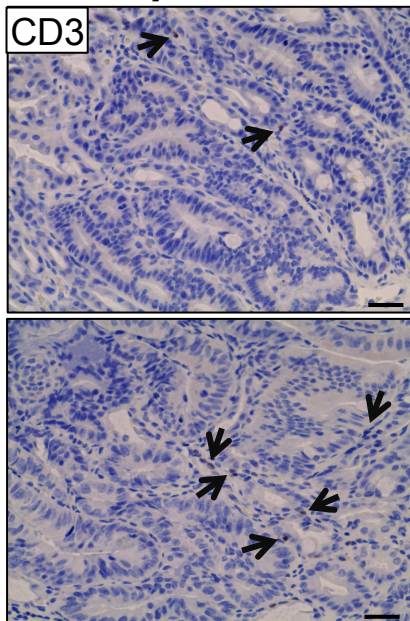
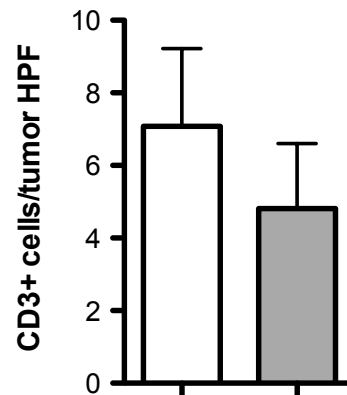
Supplementary Figure 1-2 and Table 1



Supplementary Figure 1. Survival curves of $Apc^{1638/+};Mtg^{+/+}$ (n=36), $Apc^{1638/+};Mtg16^{-/-}$ (n=19), $Apc^{1638/+};Mtgr1^{+/-}$ (n=25), $Apc^{1638/+};Mtgr1^{-/-}$ (n=7) mice. ** $P < 0.01$, Log-rank Mantel-Cox Test

a*Apc*^{1638/+}**WT***Mtgr1*^{-/-}

<i>Apc</i> ¹⁶³⁸	+/-	+/-
<i>Mtgr1</i>	+/+	-/-

b*Apc*^{1638/+}**WT***Mtgr1*^{-/-}

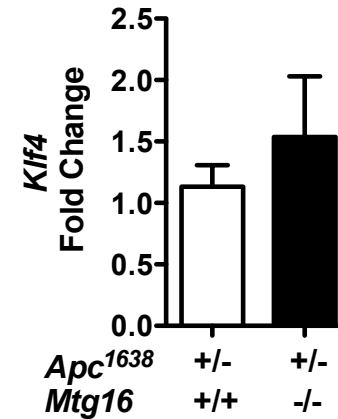
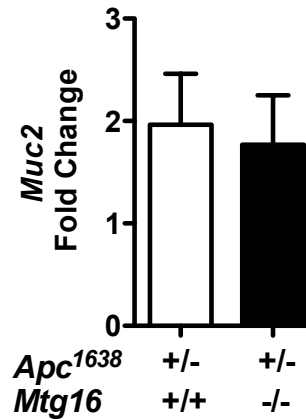
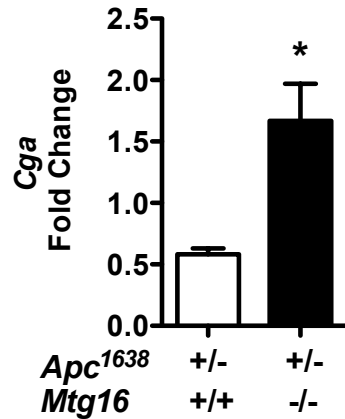
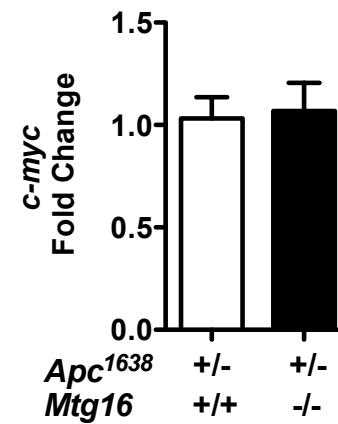
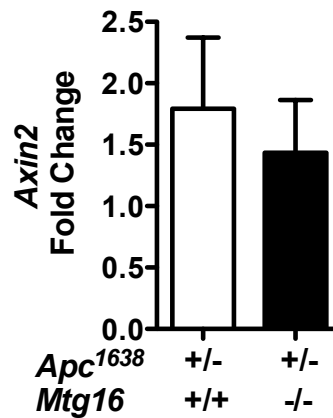
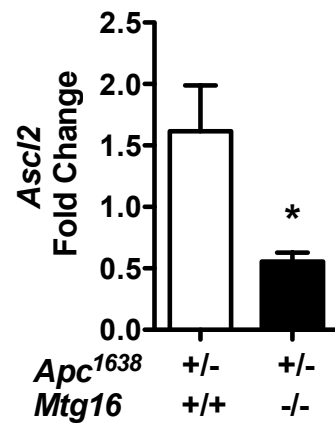
<i>Apc</i> ¹⁶³⁸	+/-	+/-
<i>Mtgr1</i>	+/+	-/-

Supplementary Figure 2.
Intratumoral immune cell infiltration in *Apc*^{1638/+};*Mtgr1*^{+/-} and *Apc*^{1638/+};*Mtgr1*^{-/-} tumors. (A) B220 immunofluorescence. Red – B220, Green – E-Cadherin, Blue – DAPI and (B) CD3 IHC immunohistochemical assessment per tumor high power field. A minimum of 5 HPF per animal were scored. Data is presented as average number of positive staining cells per tumor HPF. Size standard= 20 microns. Arrows indicate positive cells.

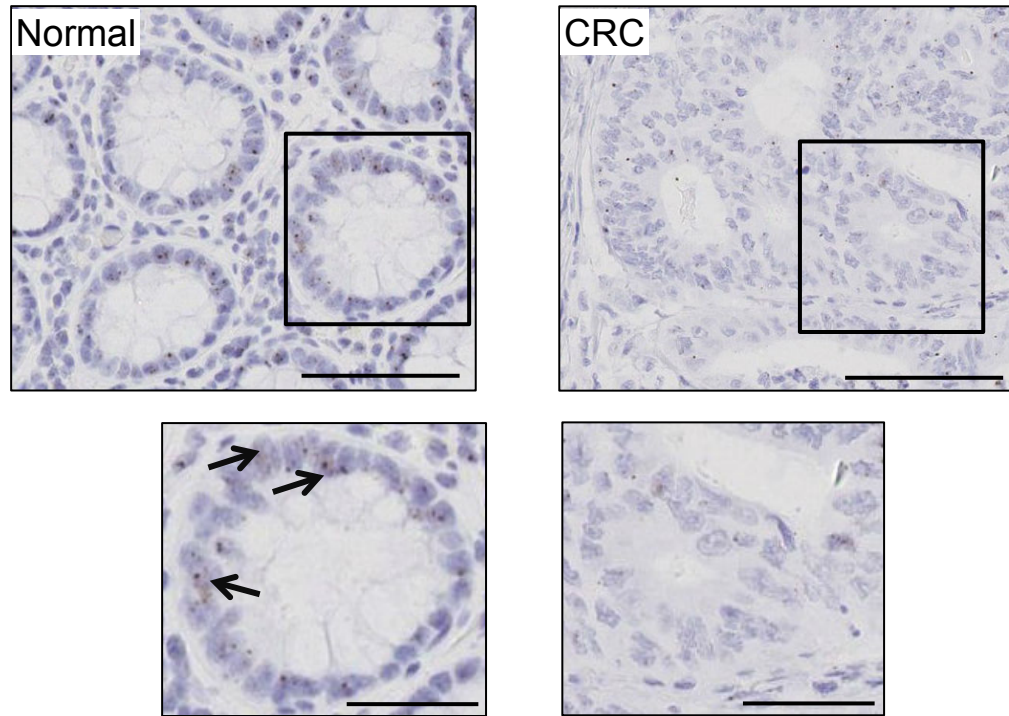
Notch and Wnt Signaling Targets

Arrb1	Ep400
Ctbp2	Gnb4
Plcb2	Arrb2
Prcka	Chd1
Ctnna3	Plcb4
Ppp2cb	Bcl9
Tcf712	Nfatc1
Tle3	Ppp3ca
Btrc	Hes1
Gna15	Prkci
Gnaq	Prkcq
Cdh23	Siah1b

Supplementary Figure 3. MTGR1 and MTG16 regulates specific genomic subsets. Wnt and Notch targets regulated by MTGR1 identified by PANTHER.



Supplementary Figure 4. Wnt and Notch signaling in *Mtg16*^{-/-} tumors. qPCR of Wnt target genes *Ascl2*, *Axin2*, and *c-Myc* and Notch target genes *Cga*, *Muc2*, and *Klf4* in *Apc*^{1638/+};*Mtg*^{+/+} (n=4) and *Apc*^{1638/+};*Mtg16*^{-/-} (n=4) tumors. Data is presented as mean \pm SEM. Student's t-test. *P<0.05



Supplementary Figure 5. *Mtgr1* RNA expression in normal colon and colorectal cancers. Size standard is 100 microns; inset size standard is 50 microns.

Gene	Spearman Coefficient	P value
Hes1	-0.30	P<0.001
Notch2	-0.18	P<0.01
Notch3	-0.17	P<0.01
Notch4	-0.25	P<0.001
Cttnb1	-0.19	P<0.01
Myc	-0.18	P<0.01
Atoh1	0.186	P<0.01
Sox9	0.31	P<0.0001

Supplementary Figure 6. *Mtgr1* is inversely correlated with Wnt and Notch activity in carcinomas. Correlations between Wnt or Notch transcriptional targets and *Mtgr1* expression in the Vanderbilt/Moffitt Cancer Center expression array dataset.

	CRC (n=102)	Normal (n=25)
Average Age (\pm sd)	64 \pm 14.9	48 \pm 21.2
Gender	Female (n=53) Male (n=49)	Male (n=14) Female (n=11)
Average BMI	n/a	24.5 \pm 2.8
Race	White (n=83) Black (n=19)	White (n=23) Black (n=2)
Grade if applicable	1 (n=14) 2 (n=62) 3 (n=26)	n/a

Supplementary Table 1. Clinical characteristics of patient samples.