

Supplemental Table 1. Demographics and case information for the 61 Vanderbilt Medical Center patients (test dataset) represented by 6 adenomas and 55 adenocarcinoma patients. The Vanderbilt test set included 15 patients from the University of Alabama-Birmingham Medical Center (one adenoma and 14 tumors provided by Martin J. Heslin, M.D.). All patients were diagnosed with adenoma or colorectal adenocarcinoma (Stages I-IV) according to current American Joint Commission on Cancer (AJCC) guidelines. *Other* in the VMC medical record implies not otherwise specified or Asian.

Supplementary Table 1 <i>VMC Demographics</i>	<i>VMC-adenomas</i>	<i>VMC-adenocarcinomas</i>
Sample size	6	55
Mean Age (s.d.)	61.7 (15.2)	62.3 (14.1)
Sex (%male)	2 (33.3%)	30 (54.5%)
Stage I	n/a	4 (7.3%)
Stage II	n/a	15 (27.3%)
Stage III	n/a	19 (34.5%)
Stage IV	n/a	17 (30.9%)
Median Follow-up Months (Min - Max)	n/a	50.2 (0.4 - 111.3)
Number of deaths	n/a	20 (36.3%)
Caucasian (%)	5 (83.3%)	50 (90.9%)
Black (%)	0 (0%)	4 (7.3%)
Other (%)	1 (16.7%)	1 (1.8%)

Supplemental Table 2. Intestinal polyp development in Min mice with los of Rab25

Rab25	No. of Mice	No. of polyps/mouse				Colon
		Small Intestine			Total	
		Proximal	Middle	Distal		
+/+	7	7.4 ±0.9	12.6±5.5	25.4±3.7	45.4±5.1	1.9±0.5
+/-	16	13.9±2.4	38.9±5.1**	45.8±4.2*	98.5±9.2**	3.5±0.6
-/-	12	20.7±3.1**	60.1±1.6***	94.3±7.8***	175.0±9.4***	4.7±0.8**

Supplement Table 3: Primers for Mouse Genotyping

Rab25	NEO-NM32	TCTATCGCCTTCTTGACGAGTTC	
	R25KO-S	TCCCCTCAGTGTCTCTGCCAG	
	R25KO-AS	GGGAACACACGGCAGAGTCTC	
Apc ^{Min}	oIMR0033	GCCATCCCTTCACGTTAG	
	oIMR0034	TTCCACTTTGGCATAAGGC	
	oIMR0758	TTCTGAGAAAGACAGAAGTTA	
Smad3	489	TGGACTTAGGAGACGGCAGTCC	
	490	CTTCTGAGACCCTCCTGAGTAGG	
	542	CTCTAGAGCGGCCTACGTTTGG	

Supplemental Figure 1. **Expression of Rab25 protein in normal C57BL/6 mouse tissues by immunohistochemistry using anti-Rab25 antibodies.** **A.** Skin **B.** Higher magnification views of A **C.** Dorsal surface of tongue **D.** Esophagus **E.** Kidney (collecting duct) **F.** Stomach (fundus) Bar=50 μ m.

Supplemental Fig. 1

