

Figure S1. Images of H&E staining of the duodenum, jejunum, ileum and colon from WT and EpCAM<sup>-/-</sup> mice at E18.5 (A) and P0 (B). Scale bar, 20  $\mu$ m.

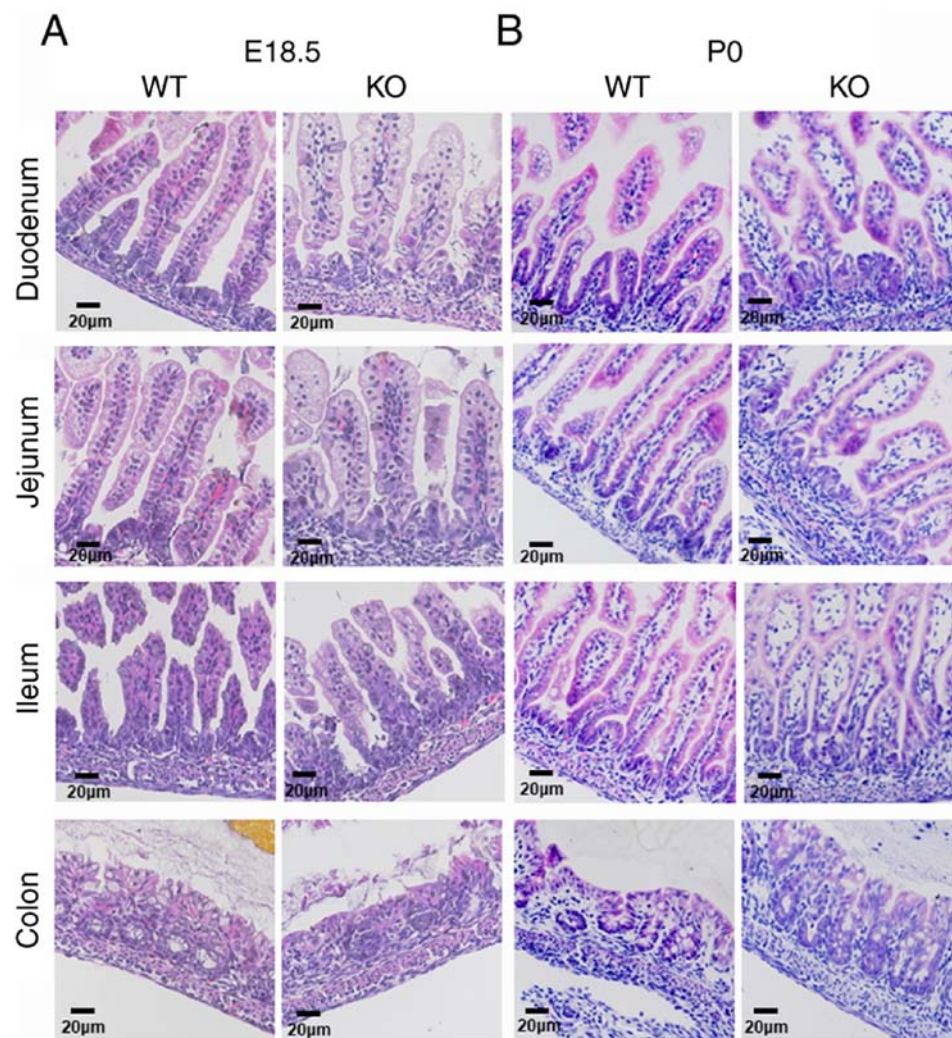


Figure S2. The E-cadherin protein gradually mislocalized in the jejunum epithelial cells of postnatal EpCAM mutant mice during development. Images of immunofluorescent staining of E-cadherin in jejunum from WT and EpCAM<sup>-/-</sup> mice at E18.5 (A), P0 (B), and P3 (C) stages. Scale bar, 20 and 4  $\mu$ m, respectively. White arrowhead, the mislocalization of E-cadherin.

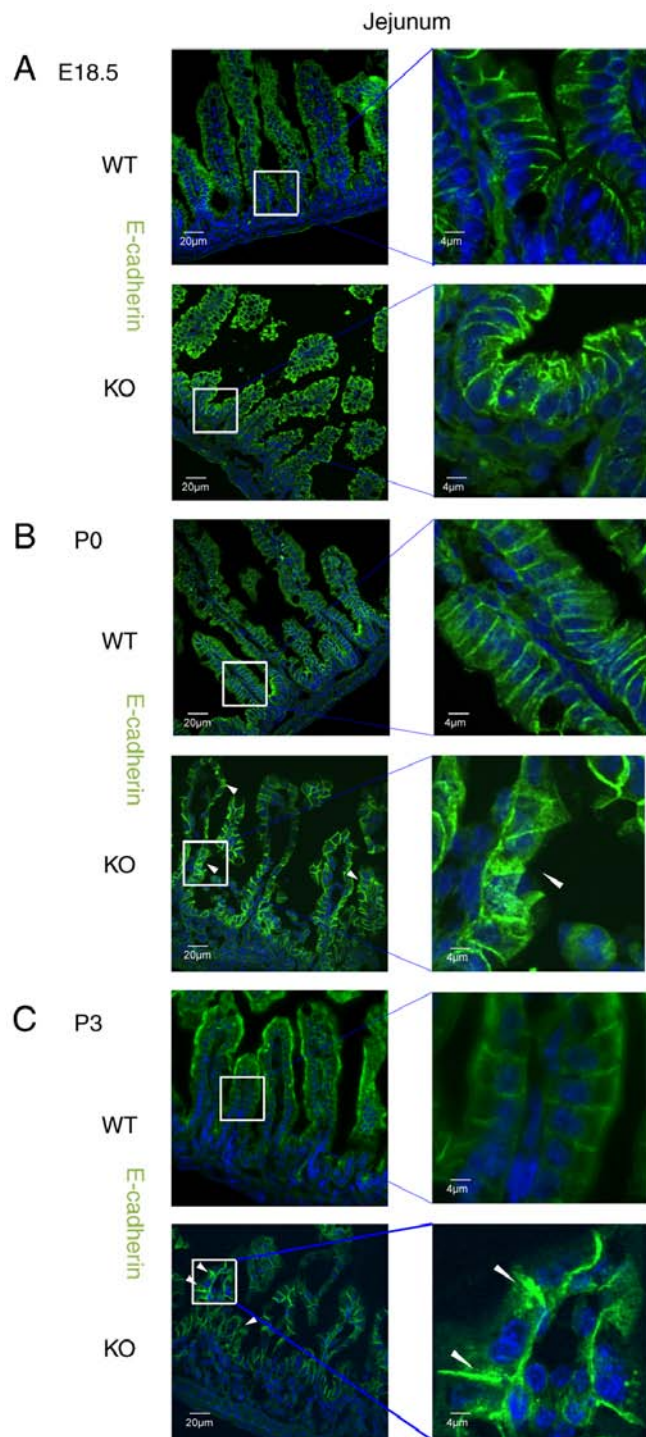


Figure S3. The  $\beta$ -catenin protein gradually mislocalized in jejunum epithelial cells of postnatal EpCAM mutant mice during development. Images of immunofluorescent staining of  $\beta$ -catenin in the jejunum from WT and EpCAM<sup>-/-</sup> mice at E18.5 (A), P0 (B), and P3 (C) stages. Scale bar, 20 and 4  $\mu$ m, respectively. White arrowhead, the mislocalization of  $\beta$ -catenin.

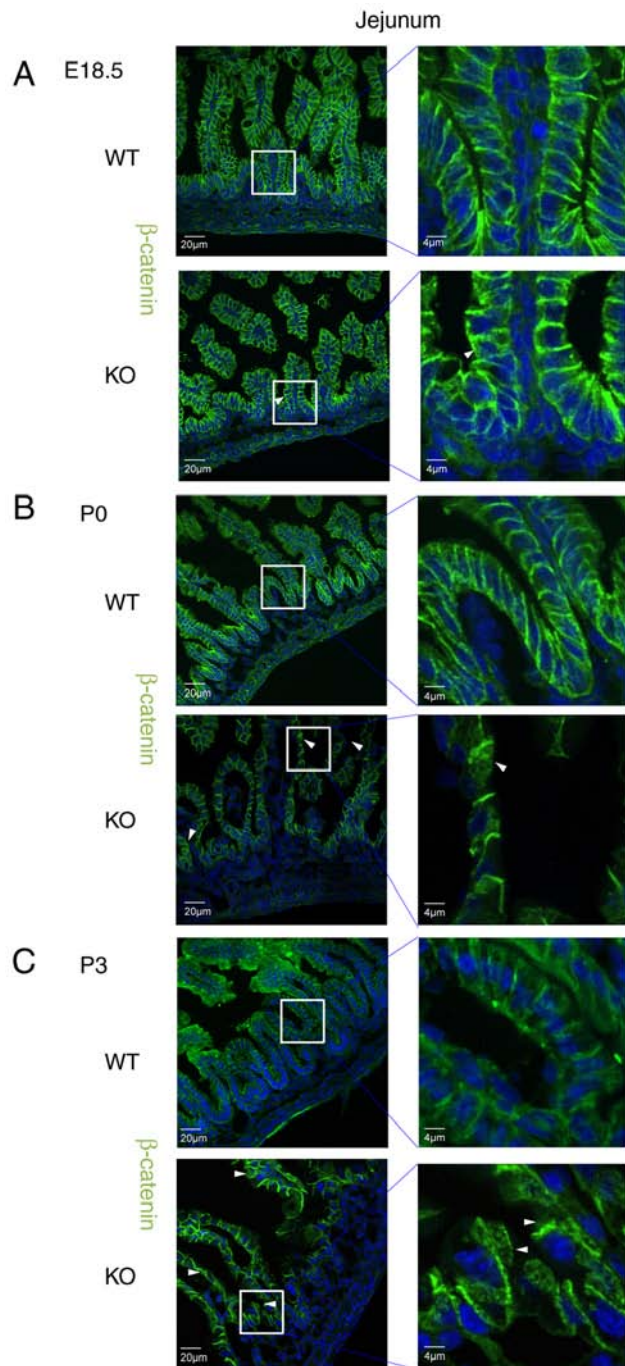




Figure S4. The p120 protein gradually mislocalized in jejunum epithelial cells of postnatal EpCAM mutant mice during development. Images of immunofluorescent staining of p120 on the jejunum from WT and EpCAM<sup>-/-</sup> mice at E18.5 (A), P0 (B), and P3 (C) stages. Scale bar, 20 and 4  $\mu$ m, respectively. White arrowhead, the mislocalization of p120.

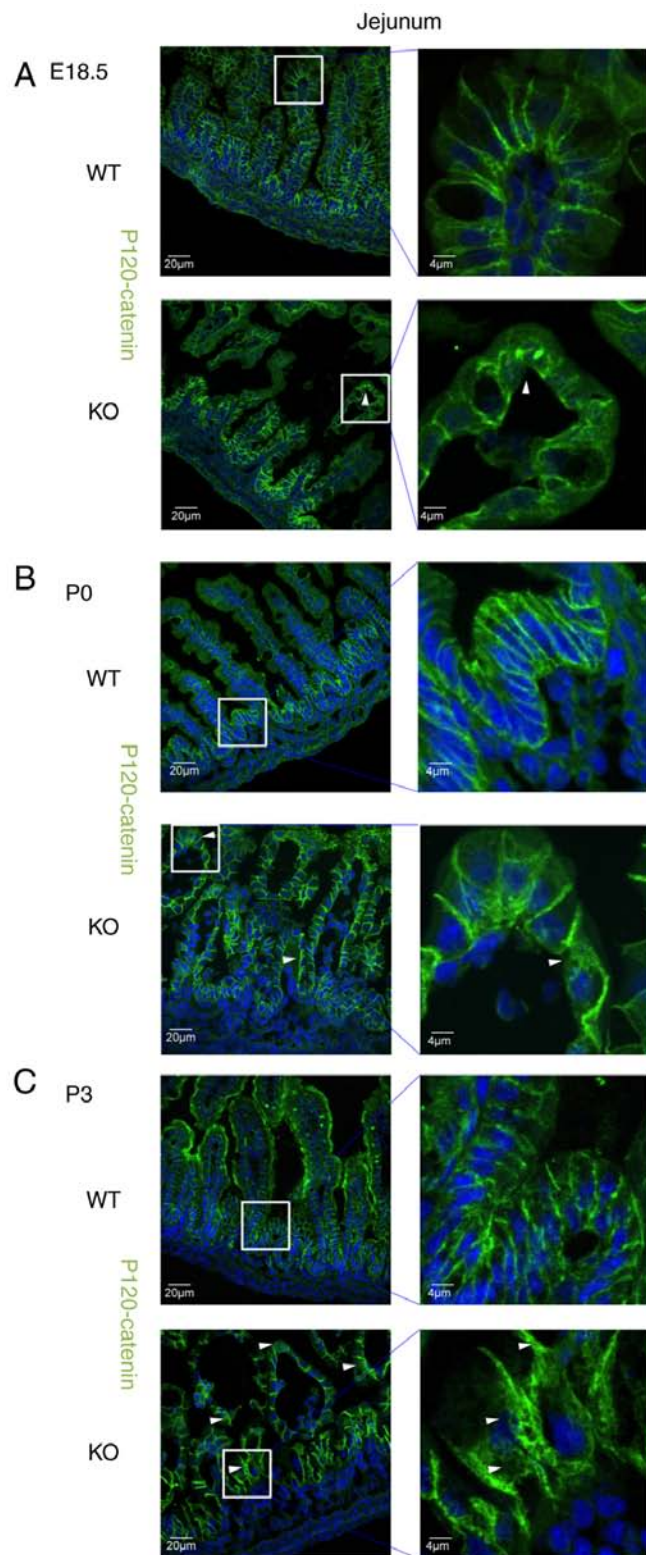


Table SI. Summary of mice used in the present study.

Item	Embryos and pups		Pregnant and breeding females
	WT	EpCAM <sup>-/-</sup>	EpCAM <sup>+/-</sup>
Genotype			
E18.5	15	15	10
P0	14	14	11
P3	18	18	13
Total	47	47	34

Table SII. Primer sequences for RT-qPCR.

Primer name	Species	Forward/Reverse
<i>E-cadherin</i>	Mouse	GGTCTCTTGTCCTTCCACA
<i>E-cadherin</i>	Mouse	CCTGACCCACACCAAAGTCT
<i>P120-catenin</i>	Mouse	AGGATGCAGGAGCCAGGACAG
<i>P120-catenin</i>	Mouse	TGGTCTCCGTGCGTCTAGTGG
$\beta$ -catenin	Mouse	TGACTAGGGCTCAGAGGGTC
$\beta$ -catenin	Mouse	ATTGCACGTGTGGCAAGTTC
<i>Nectin1</i>	Mouse	CCAGGAAATTCGGAACCCCA
<i>Nectin1</i>	Mouse	TGCACGTGAGCTTCACATCT
<i>GAPDH</i>	Mouse	GCATCCACTGGTGCTGCC
<i>GAPDH</i>	Mouse	TCATCATACTTGGCAGGTTTC