

Figure legends for supplemental materials

Supplementary Figure S1. Northern blot analyses of Neat1 expression in various tissues of Neat1^{PAS/ Δ PAS} mice

(A) Schematics of the probes used for the detection of Neat1₁ and Neat1₂. The Neat1/2 probe detected both isoforms, whereas the Neat1₂ probe targeted a region specific to the long isoform. (B, C) Expression of Neat1 isoforms, as revealed by probes that detected Neat1/2 (B) and Neat1₂. Asterisks indicate lanes with degraded RNAs, which were not included in the statistical analyses shown in **Figure 2D**. (C). Note the variable expression of Neat1₁ and Neat1₂ in the wild-type mice and the variable upregulation of Neat1₂ in Neat1^{PAS/ Δ PAS} mice.

Supplementary Figure S2. Northern blot analyses of Neat1 expression in representative tissues of Neat1 KO mice

(A) Schematics of the probes used for the detection of Neat1₁ and Neat1₂. The Neat1/2 probe detected both isoforms, whereas the Neat1₂ probe targeted a region specific to the long isoform. (B, C) Expression of Neat1 isoforms, as revealed by probes that detected Neat1/2 (B) and Neat1₂ (C).

Supplementary Figure S3. RT-qPCR analyses of Neat1₂ expression in various tissues of Neat1^{PAS/ Δ PAS} mice

(A) Schematics of the regions amplified by RT-qPCR primers used for the detection of Neat1_{1/2} and Neat1₂. The Neat1_{1/2} primers detected both isoforms, whereas the Neat1₂ primers targeted a region specific to the long isoform. (B) RT-qPCR analyses of Neat1_{1/2} and Neat1₂ expression in the RNA samples shown in **Supplemental Figure S2**. The Neat1 expression was normalized by the expression of Gapdh except for liver and colon samples, which were normalized by the expression of β -actin because of variable expression of Gapdh in these tissues. The dots and bars represent the mean value and the standard deviation for the biological triplicates, respectively.

Supplementary Figure S4. The expression patterns of marker genes were not significantly altered in the intestine and salivary gland of Neat1 KO mice

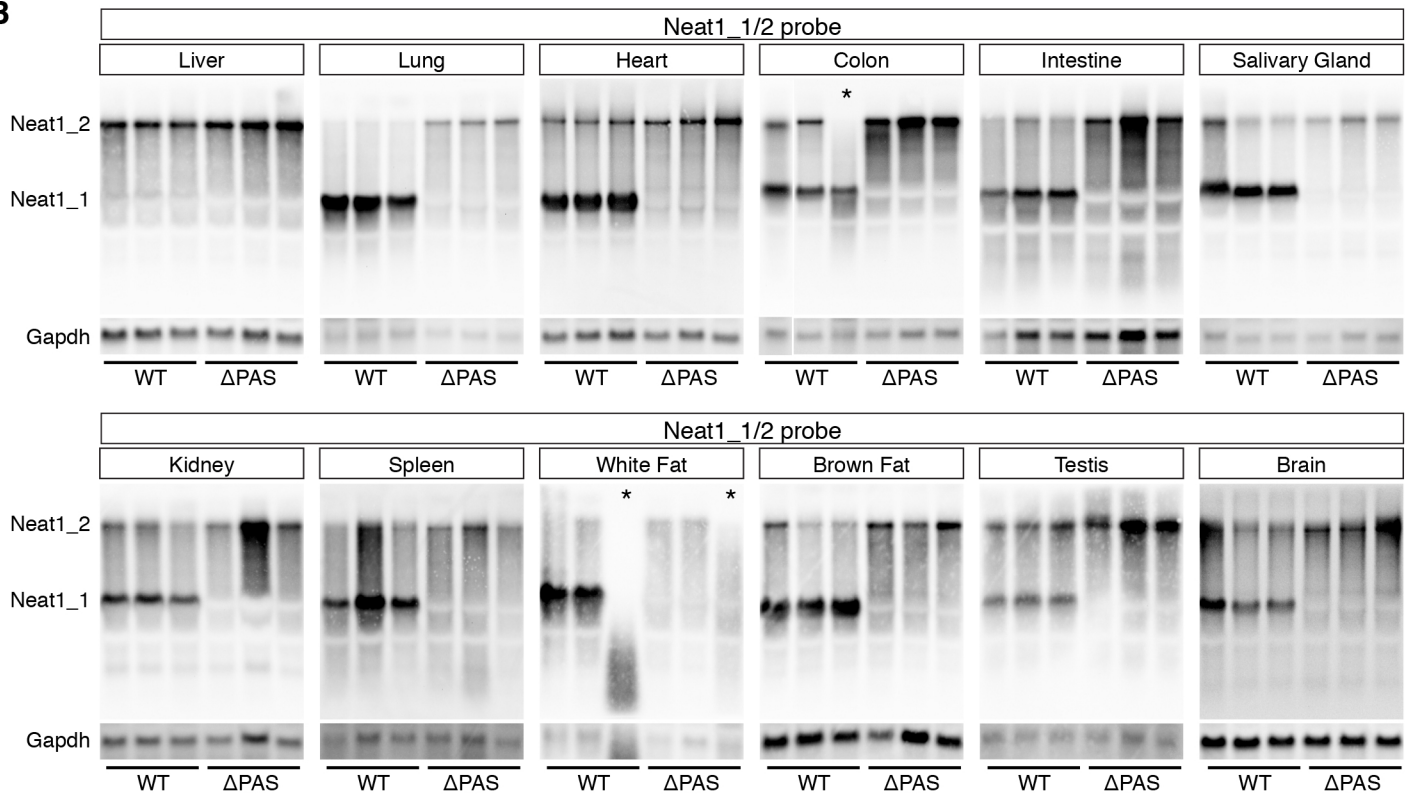
(A) Schematics of the expression patterns of marker genes expressed in the intestinal epithelium. Note that the zonation of the enterocytes can be distinguished by different

combinations of the marker genes. (B) In situ hybridization analyses of marker genes in the intestine. (E) Schematics of the expression pattern of the acinar cell marker *Nkcc1* and the granular duct cell marker *Ngf*. (F) In situ hybridization analyses of marker genes in the salivary gland. Scale bars, 100 μm .

A



B



C

