

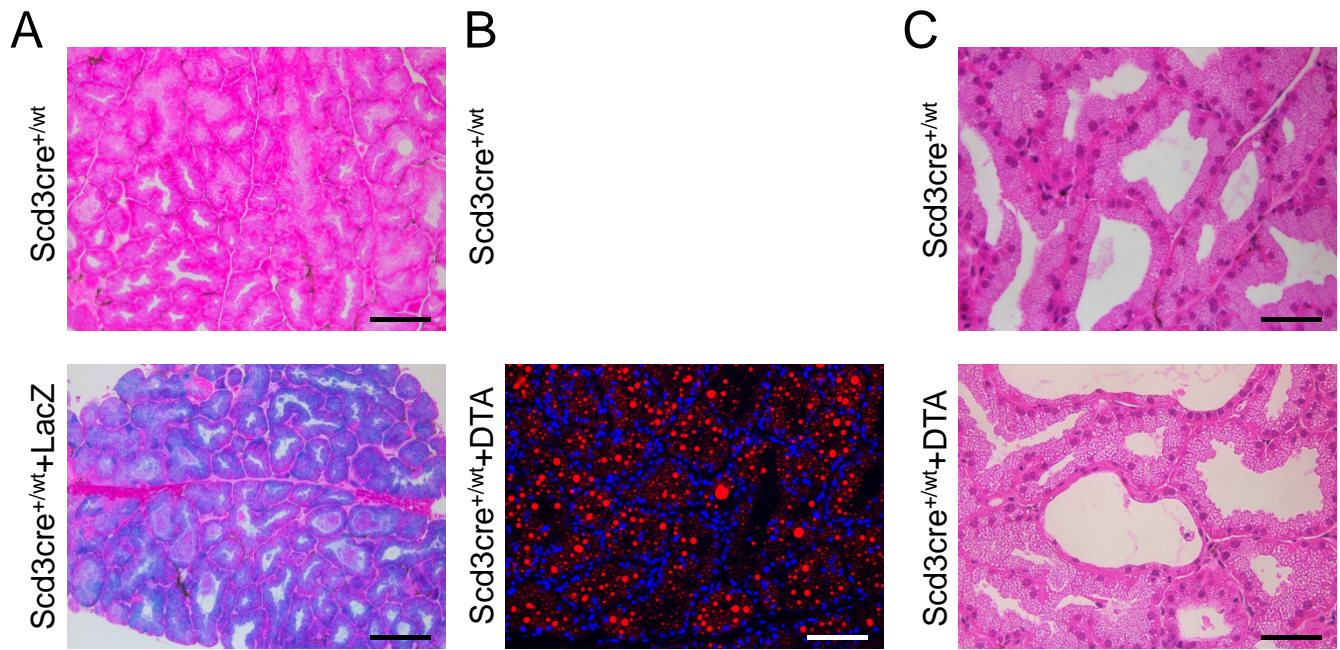
**Fig. S1.** Expression of cre under the control of the *Scd3* locus. (A) RT-PCR analysis confirmed that expression of *Scd3* and *iCre* was limited to back (bSk) and tail (tSk) skin and to the Harderian (Hg) and preputial (Pr) glands. Ki, kidney; Sp, spleen; He, heart; Lu, lung; L, liver; Mu, muscle. (B) RT-PCR analysis also confirmed that *Scd3* and *iCre* are not expressed in the subcutaneous (1), perirenal (2), abdominopelvic (3), and perigonadal (4) white adipose tissue depots or in brown adipose tissue (BAT). (C) Staining for  $\beta$ -galactosidase activity revealed expression of cre in Meibomian and preputial glands, in a small number of cells in the small intestinal epithelium, and in a few neurons in the cerebral cortex. Scale bar indicates 50  $\mu$ m.











**Fig. S6.** Expression of cre and analysis of DTA-induced changes in the Harderian gland. (A) Staining for  $\beta$ -galactosidase activity revealed widespread expression of cre in Harderian glands of Scd3cre<sup>+/wt</sup>+LacZ mice (lower panel). (B) Fluorescent images of DAPI and Nile red-stained sections suggests that lipid production is largely maintained in the Harderian glands of Scd3cre<sup>+/wt</sup>+DTA mice. (C) H&E staining showing normal acinar structure in the Harderian gland of control mice (Scd3cre<sup>+/wt</sup>, upper panel). In Harderian glands of Scd3cre<sup>+/wt</sup>+DTA mice (lower panel), multifocal acinar dilatation with epithelial flattening, loss of lipid droplets, and the presence of dark, elongated nuclei was observed. Scale bars indicate 100  $\mu$ m (A, B) or 50  $\mu$ m (C).