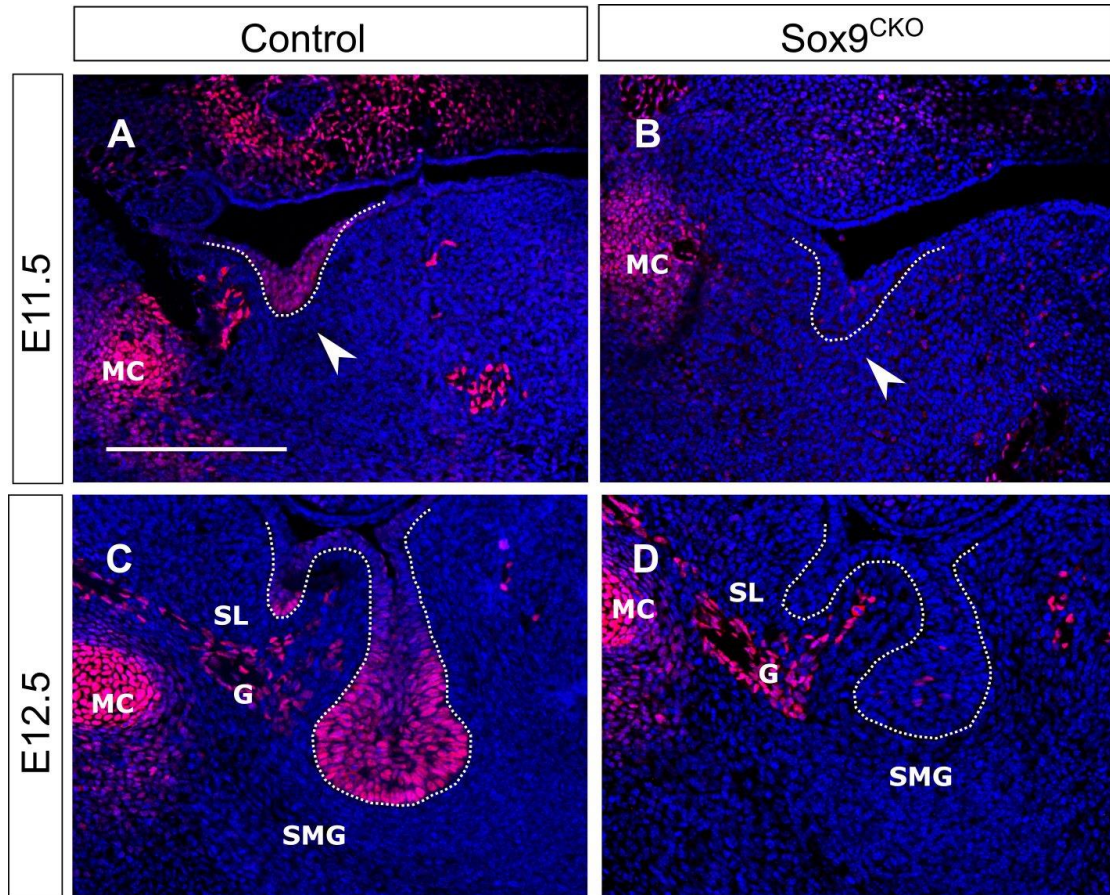
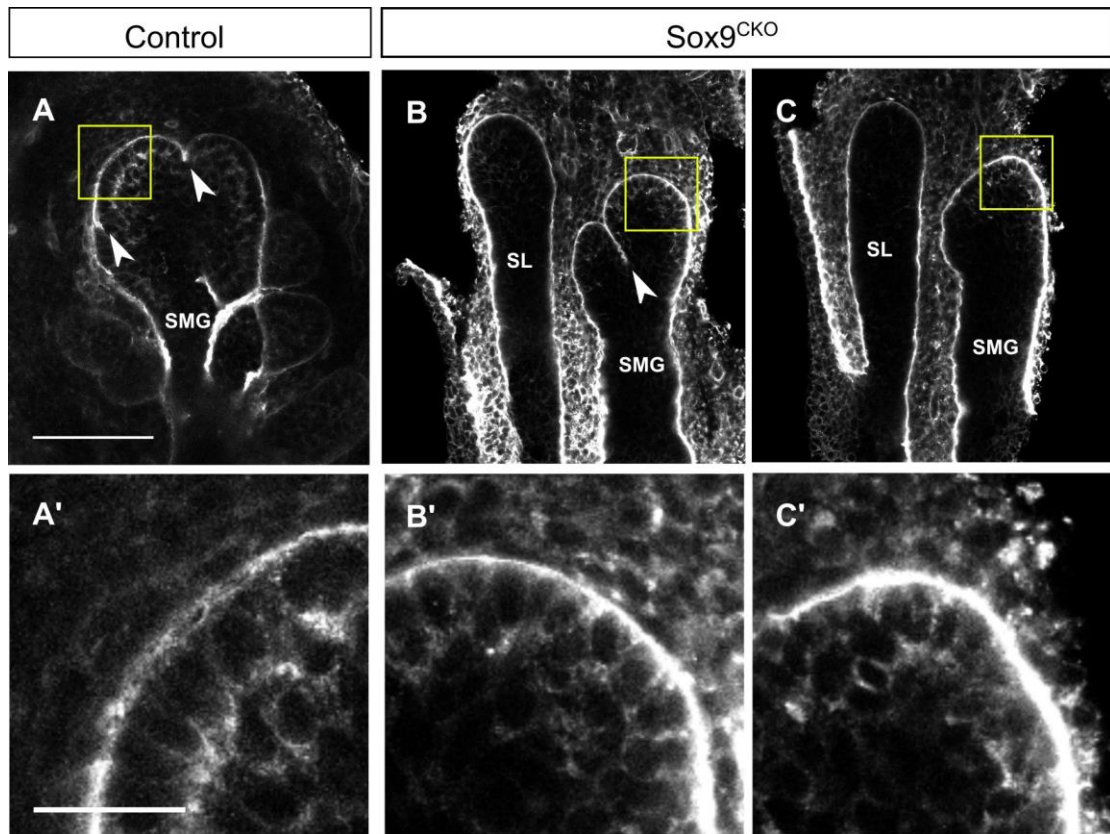


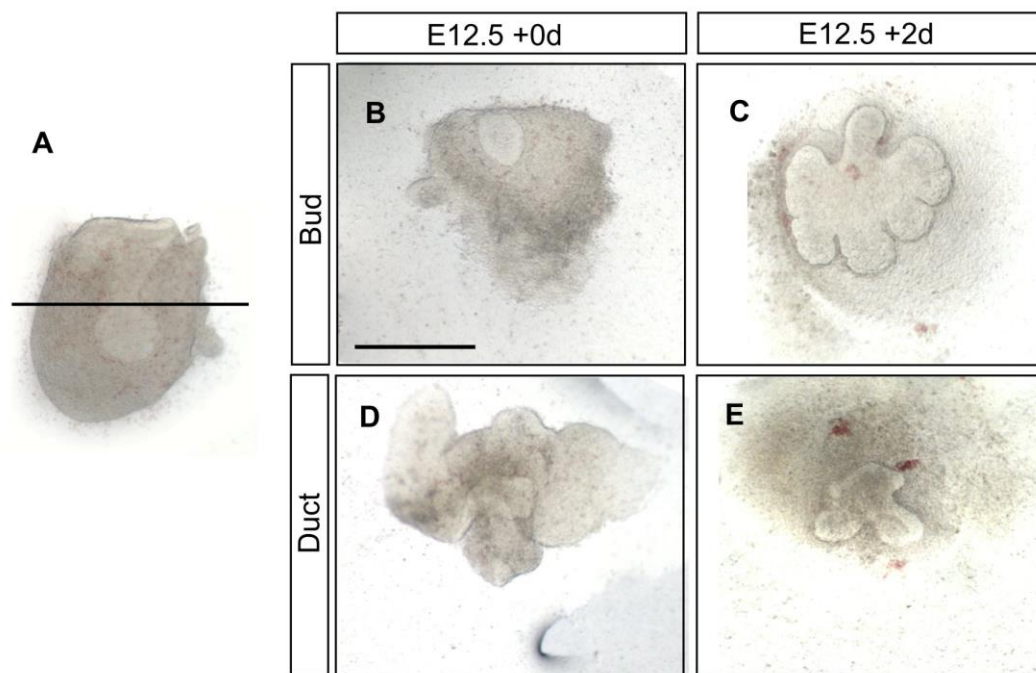
Supplementary Figures



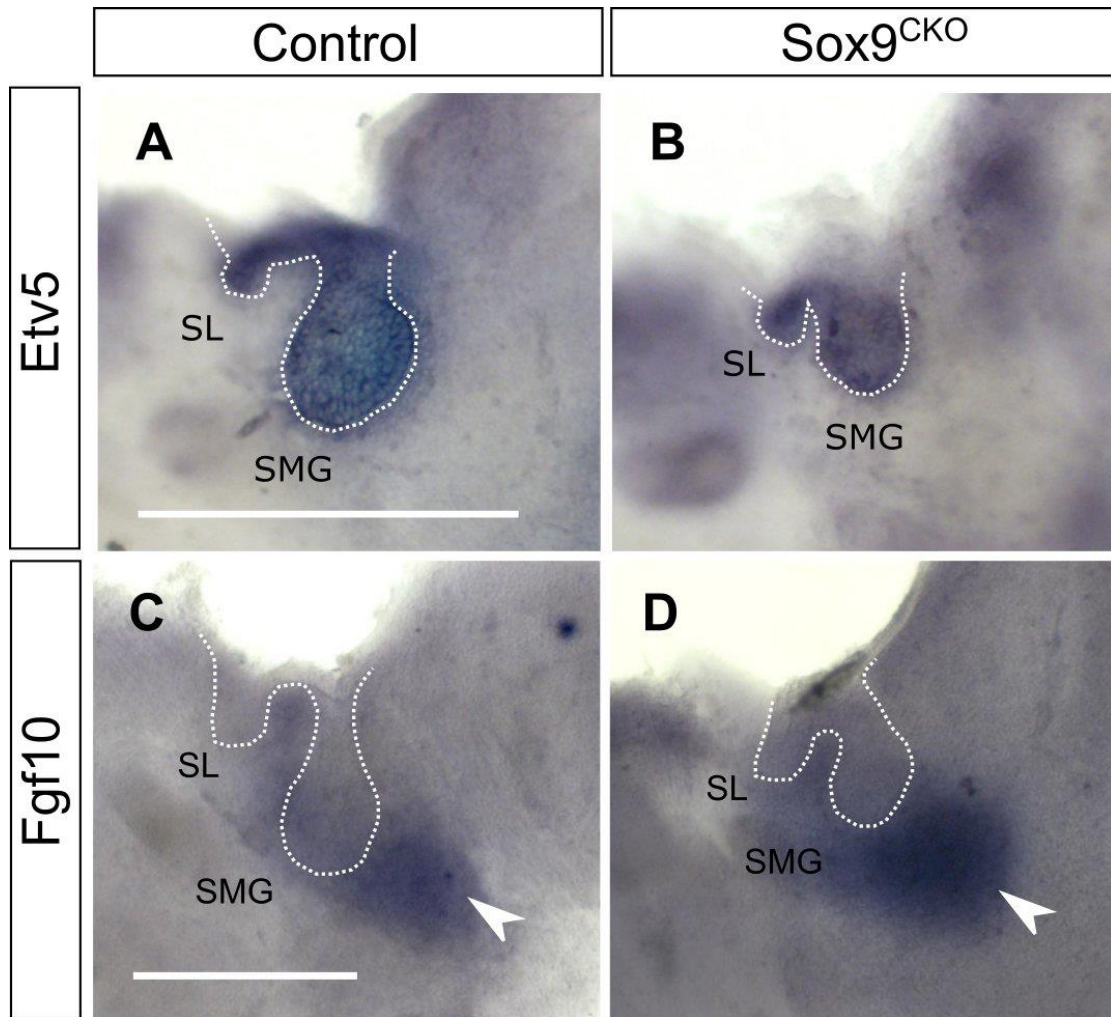
**Figure S1. *Sox9* is deleted from the epithelium of the placodes by E11.5 and it is not required for salivary gland initiation.** *Sox9* immunofluorescence (red) in the control (A, C) and *Sox9*<sup>CKO</sup> (B, D) submandibular glands at E11.5 (A, B) and E12.5 (C, D). Arrowheads indicate the placodes. MC: Meckel's cartilage, G: ganglion, SMG: submandibular gland, SL: sublingual gland. Scale bar: 200 $\mu$ m.



**Figure S2. Cleft formation and epithelial laminin lining visualised by immunofluorescence for laminin.** A-C Immunofluorescence for laminin in E13.5 control (A) and *Sox9*<sup>CKO</sup> salivary glands with (B) or without clefts (C). Scale bar: 100 $\mu$ m. A'-C': Magnification of the yellow box showing in A-C. Scale bar: 25 $\mu$ m. Arrowheads indicate clefts.



**Figure S3. Branch formation initiates and proceeds independently of the stalk region.** A: Brightfield image of a bud at E12.5 showing the level of dissection (black line). B, D: Dissected E12.5 enbud (B) and stalk (D) at the day of collection. C, E: Brightfield images of the bud (C) and stalk (E) region after 2 days of *ex vivo* explant culturing. Scale bar 500 $\mu$ m.



**Figure S4.** Erk signalling and *Fgf10* expression seems unchanged in the *Sox9*<sup>CKO</sup> SMGs. *In situ* hybridization for *Etv5* (A, B) and *Fgf10* (C, D) in the control (A, C) and *Sox9*<sup>CKO</sup> (B, D) buds at E12.5. Arrowheads indicate the expression of *Fgf10* in the mesenchyme. Scale bars: 500µm.