

Excess NF- κ B Induces Ectopic Odontogenesis in Embryonic Incisor Epithelium

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Appendix

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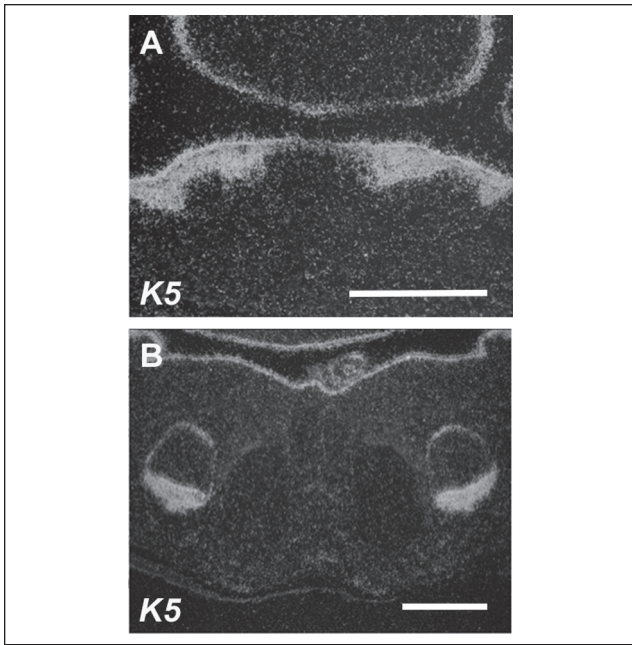
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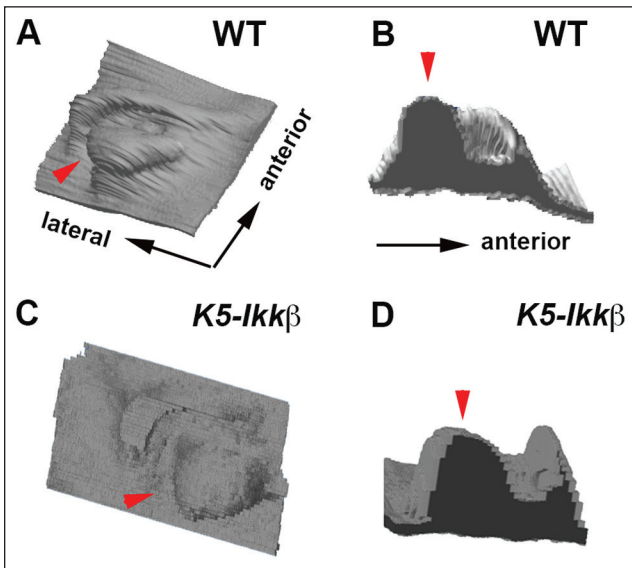
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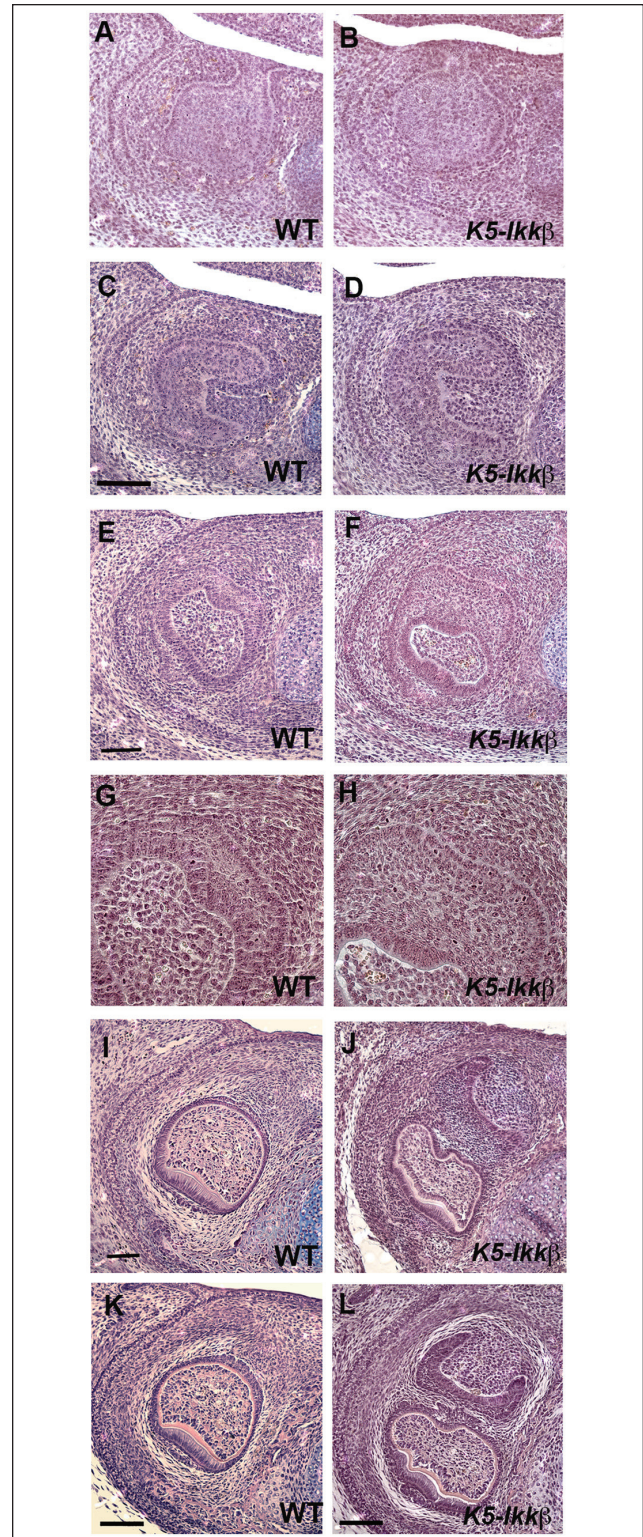
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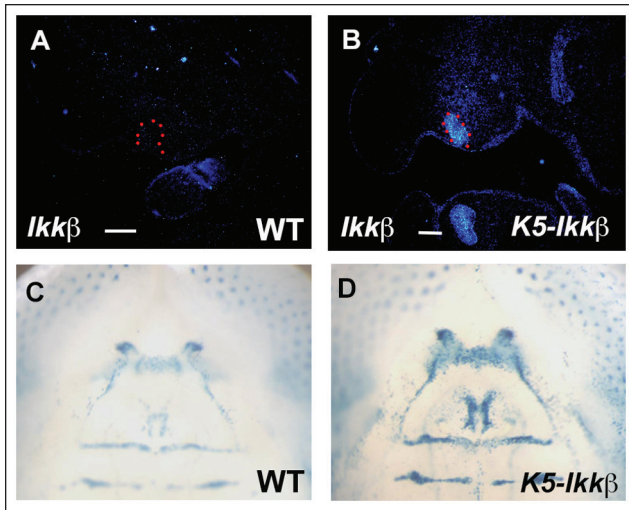
Appendix Figure 1. K5 expression in incisor development. K5 expression by radioactive in situ hybridization on frontal head sections at E12.5 (A) and E17.5 (B). Scale bars: 250 μ m (A), 500 μ m (B).



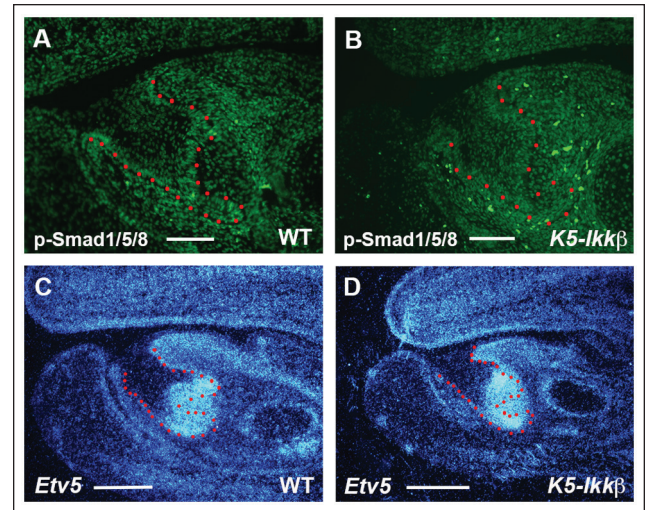
Appendix Figure 2. Lower incisor epithelium at E13.5. Three-dimensional (3D) reconstructions of the epithelium in the incisor region at E13.5. The epithelium is viewed from mesenchymal aspect (aboral view; A, C). Sagittal sections through the 3D model (B, D). Wild-type (A, B) and *K5-Ikk β* (C, D) embryos. Formation of a supernumerary incisor in *K5-Ikk β* embryos is not visible yet. Arrowheads indicate the epithelial bud of endogenous incisors.



Appendix Figure 3. Supernumerary incisor development on frontal histological sections. Frontal sections showing lower incisors in wild-type (A, C, E, G, I, K) and *K5-Ikk β* (B, D, F, H, J, L) at E14.5 (A-D), E15.5 (E-H), E16.5 (I, J), and E17.5 (K, L). (A, B) Anterior region of incisors where dental epithelium is connected to the oral epithelium. (C, D) Posterior region of incisors where there is no epithelial connection between dental and oral epithelium. (G, H) High magnification of the lingual region of the incisor tooth germ from E and F, respectively. Scale bar, 100 μ m.



Appendix Figure 4. Molecular changes in the upper incisors of *K5-Ikkβ* mice. *Ikkβ* expression by radioactive in situ hybridization (**A, B**) on sagittal sections of wild-type (**A**) and *K5-Ikkβ* mice (**B**) at E13.5. (**C, D**) LacZ staining in $(Igx)_{3x}$ -*conalacZ* (**C**) and $(Igx)_{3x}$ -*conalacZ*;*K5-Ikkβ* (**D**) mice at E14.5. Scale bars: 200 μm (**A, B**). Tooth epithelium is outlined by red dots.



Appendix Figure 5. Molecular changes in the lower incisor of *K5-Ikkβ* mice. Immunolocalization of phosphorylated Smad1/5/8 (**A, B**) and *Etv5* mRNA expression (**C, D**) on sagittal head sections at E14.5. Tooth epithelium is outlined by red dots. Scale bars: 200 μm (**A, B**), 400 μm (**C, D**).

Appendix Table. Frequency Distribution of the Extra Incisors in *Ikkβ*-K5 Mice.

	E16.5	Adult (>6 wk)
Number of mice	43/43	63/63