

**Supplemental video 1. Continuous hematoxylin and eosin staining of serial sections of the thyroid gland of an *Fgf10* Ex1<sup>wild</sup>/Ex3<sup>wild</sup> neonate.**

**Supplemental video 2. Continuous hematoxylin and eosin staining of serial sections of the thyroid gland of an *Fgf10* Ex1<sup>mut</sup>/Ex3<sup>mut</sup> neonate with severe thyroid hypoplasia.**

**Supplemental video 3. Continuous hematoxylin and eosin staining of serial sections of the thyroid gland of an *Fgf10* Ex1<sup>mut</sup>/Ex3<sup>mut</sup> chimeric neonate complemented with embryonic stem cells.**