

Gli1-CreERT2

Nomenclature	C57BL/6Smoc- <i>Gli1</i> ^{em1(CreERT2-Wpre-polyA)Smoc}
Cat. NO.	NM-KI-200073
Strain State	Repository Live

Gene Summary

Gene Symbol Gli1	Synonyms	Zfp5; Zfp-5; AV235269
	NCBI ID	14632
	MGI ID	95727
	Ensembl ID	ENSMUSG00000025407
	Human Ortholog	GLI1

Model Description

A CreERT2-Wpre-polyA expression cassette was knocked into the Gli1 gene start codon site. Gli1 encodes a member of the Kruppel family of zinc finger proteins. The encoded transcription factor is activated by the sonic hedgehog signal transduction cascade and regulates stem cell proliferation. The activity and nuclear localization of this protein is negatively regulated by p53 in an inhibitory loop. When these Gli1-CreERT2 mice are bred with mice containing a loxP-flanked sequence of interest, tamoxifen-inducible, Cre-mediated recombination will result in deletion of the flanked sequences in Gli1 expressing cells; making them useful for studying axis patterning, proliferation, and cell fate specification of Hedgehog responding cells at different stages of embryogenesis.

Research Application: Cre recombinase tool; Hedgehog signal pathway

*Literature published using this strain should indicate: Gli1-CreERT2 mice (Cat. NO. NM-KI-200073) were purchased from Shanghai Model Organisms Center, Inc..

Validation Data

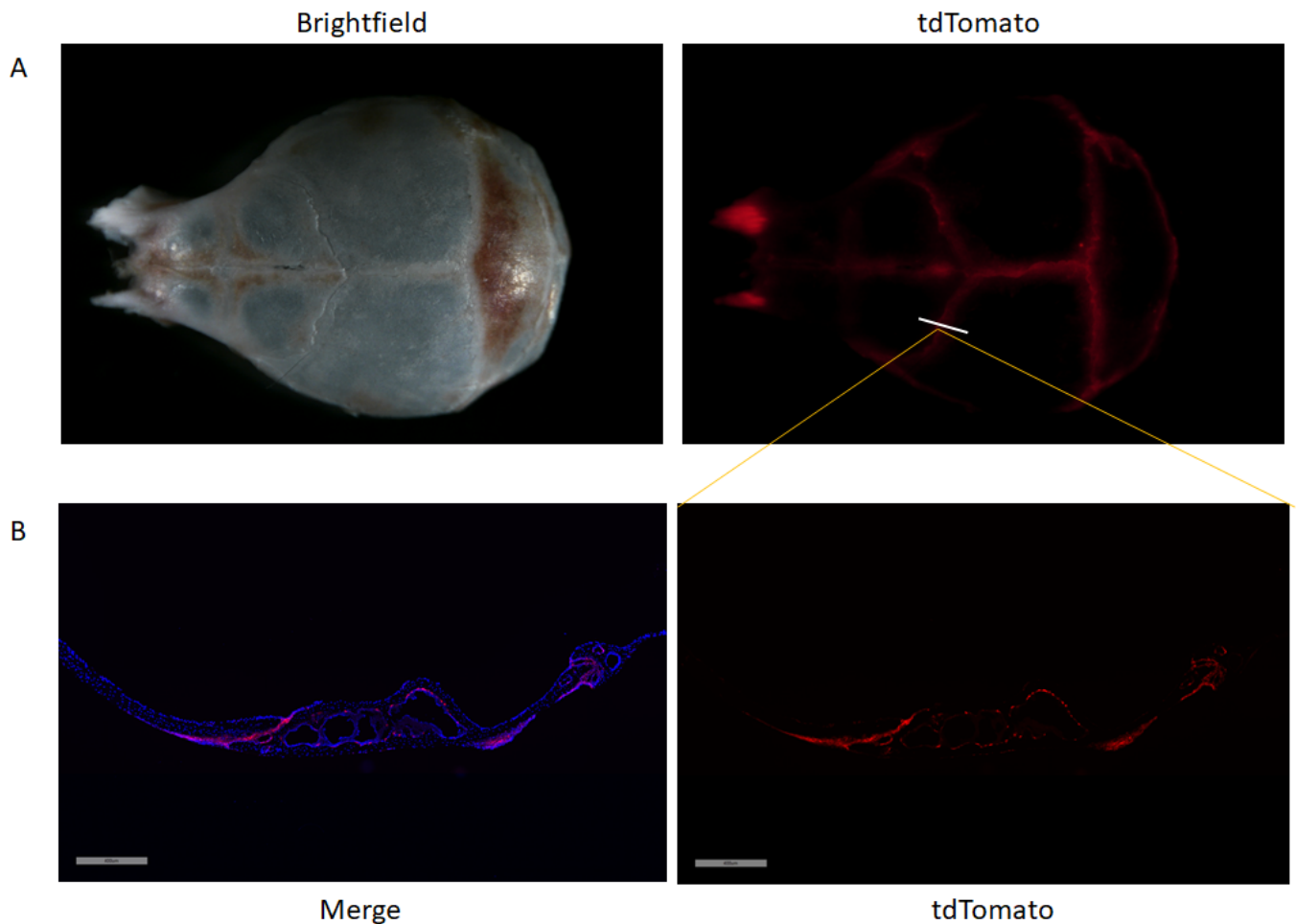


Fig1 CreERT2-mediated recombination in Gli1-CreERT2; Rosa26-tdTomato mice after tamoxifen treatment. At one month of age, tdtomato are detectable within the suture mesenchyme of craniofacial bones. (A) Whole-mount labeling of tdTomato of calvarial bones of one-month-old Gli1-CreERT2; Rosa26-tdTomato mice. (B) Labeling of sections of sagittal sutures and parietal bones of one-month-old mice.

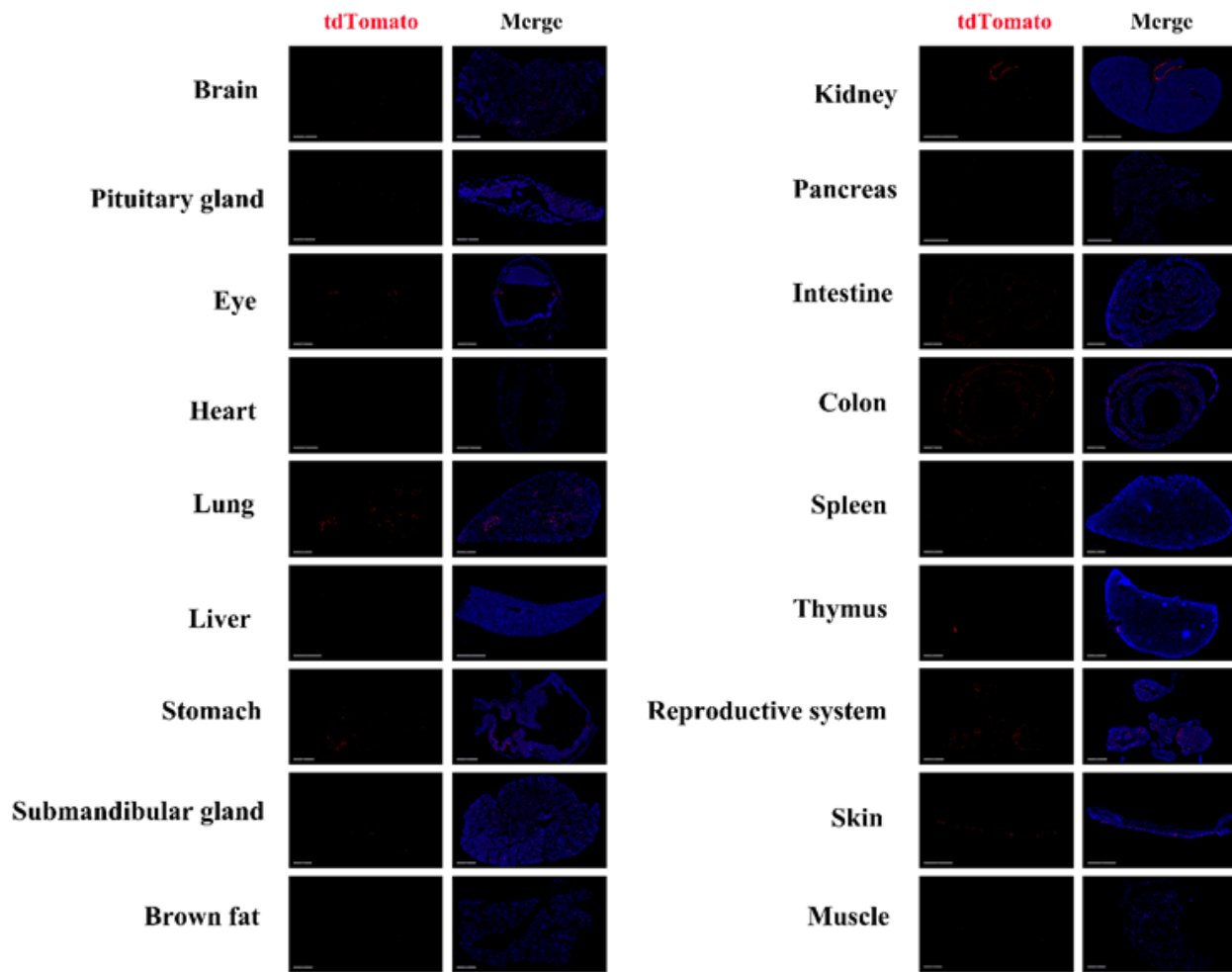


Fig. 2 Labeling was also observed in cortex, hippocampus, thalamus, some cells of pituitary gland, submandibular gland, kidney, ovary, large intestine, small intestine, skin follicles, alveoli, bronchi, individual cells of liver, heart, muscle, and spleen, but not in pancreas and thymus. (For more information please contact: 400-728-0660.)