Nos1-IRES-Cre

Nomenclature	C57BL/6Smoc-*Nos1*$^{em1(IRES-iCre)Smoc}$
Cat. NO.	NM-KI-200113
Strain State	Repository Live

Gene Summary

Gene Symbol Nos1	**Synonyms**	NO; NOS; bNOS; nNOS; N-NOS; NOS-I; Nos-1; NC-NOS; 2310005C01Rik
	NCBI ID	18125
	MGI ID	97360
	Ensembl ID	ENSMUSG00000029361
	Human Ortholog	NOS1

Model Description

A IRES-iCre expression cassette was knocked into the Nos1 gene stop codon site.

Research Application： Cre recombinase tool; NOS1, the neurogenic nitric oxide synthase, is a key enzyme responsible for the production of the signaling molecule nitric oxide (NO) by neurons. When crossed with a strain carrying a gene flanked by loxP sites, the flanked gene will be removed in cells expressing cre. This strain may be useful for studying diseases with impaired or reduced nitric oxide release, such as achalasia of cardia, hirschsprung's disease, hypertrophic pyloric stenosis, etc.

*Literature published using this strain should indicate: Nos1-IRES-Cre mice (Cat. NO. NM-KI-200113) were purchased from Shanghai Model Organisms Center, Inc..
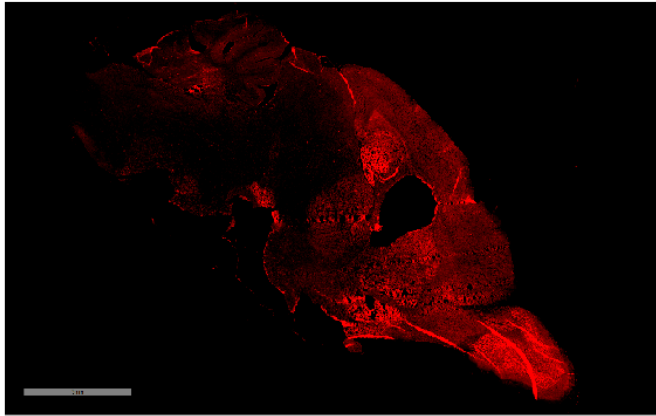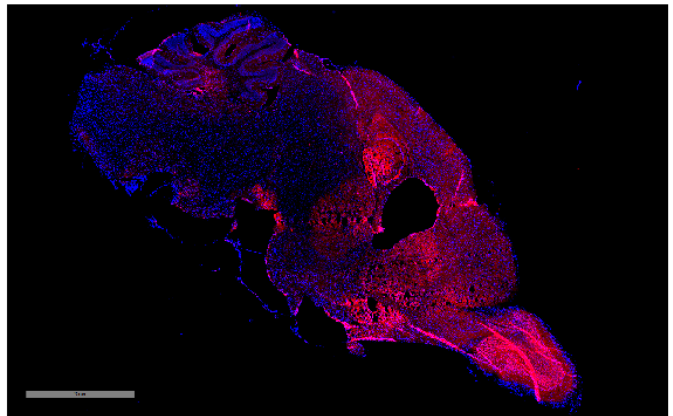
Validation Data

tdTomato

Merge

Fig. 1 Cre-mediated recombination in the brain of Nos1$^{Cre/+}$; Rosa26$^{tdTomato/+}$ mouse. TdTomato(red) expression can be detected in the olfactory bulb, cortex and hippocampus derived from Nos1$^{Cre/+}$; Rosa26$^{tdTomato/+}$ mouse.
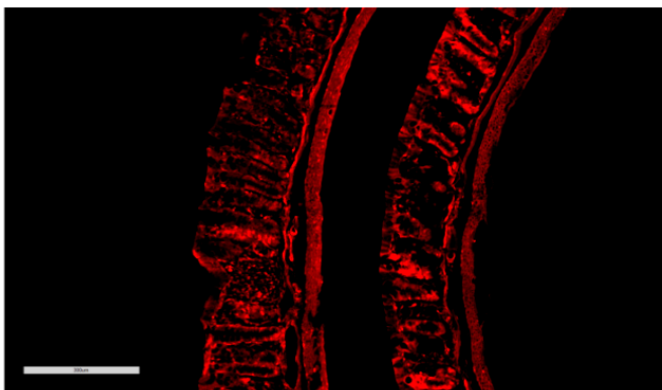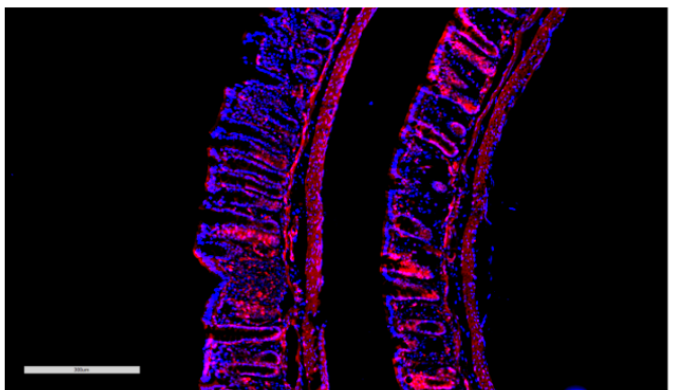
tdTomato

Merge

Fig. 2 Cre-mediated recombination in the large intestine of Nos1$^{Cre/+}$; Rosa26$^{tdTomato/+}$ mouse. TdTomato(red) expression can be detected in the muscular layer and mucous layer of the wall of the large intestine derived from Nos1$^{Cre/+}$; Rosa26$^{tdTomato/+}$ mouse.
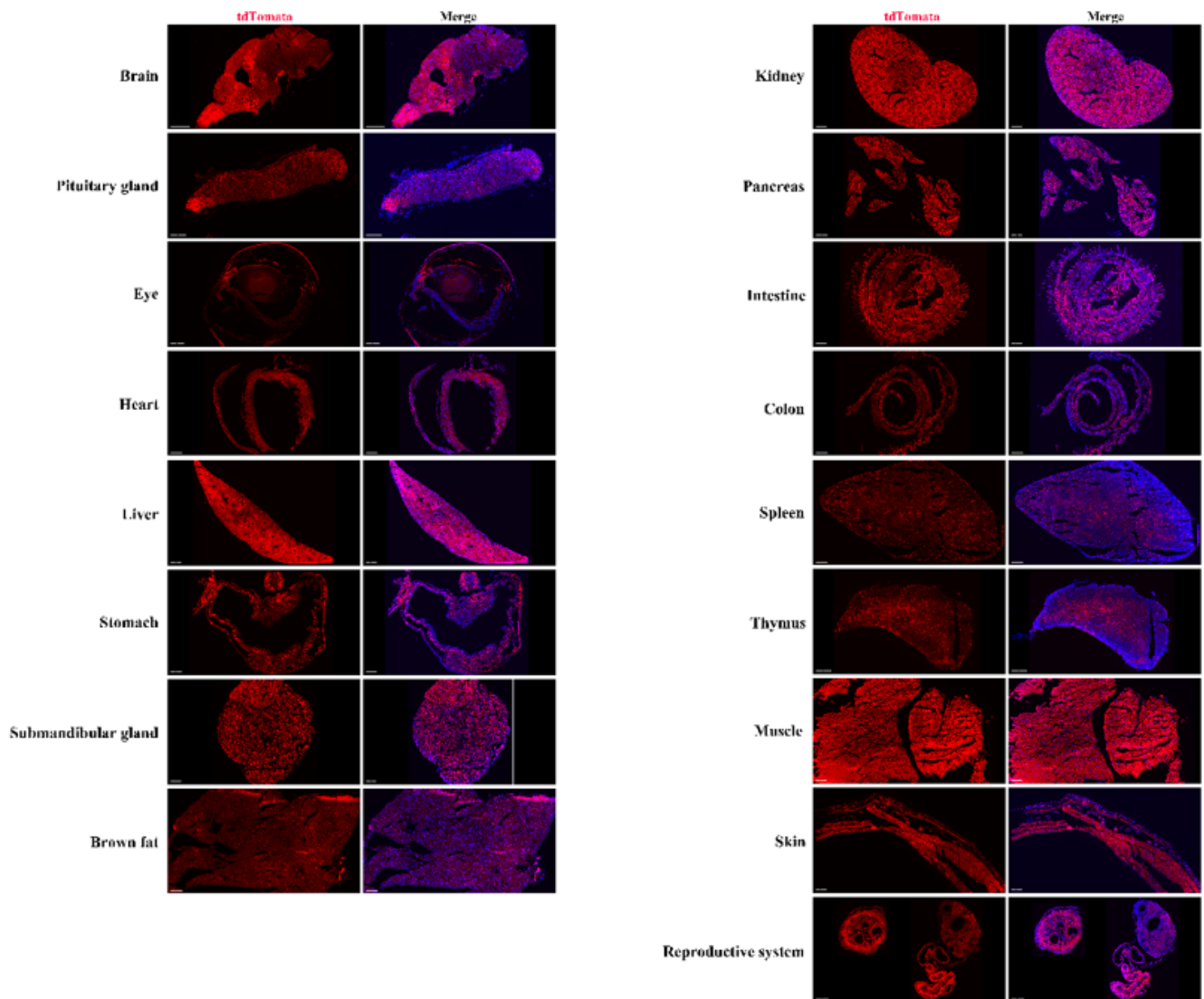
Fig. 3 Detection of tdTomato(red) in various tissues of Nos1$^{Cre/+}$; Rosa26$^{tdTomato/+}$ mice. Cre mediated recombination can be detected in the brain, eyes, pituitary gland, heart, liver, stomach, brown fat, kidney, pancreas, thymus, colon, spleen, skin, muscle, uterus, ovary and submandibular gland. (For more detailed information please contact our technical advisor.)