

Nos1-IRES-Cre

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| Nomenclature | C57BL/6Smoc- <i>Nos1</i> ^{em1(IRES-iCre)Smoc} |
| Cat. NO. | NM-KI-200113 |
| Strain State | Sperm cryopreservation |

Gene Summary

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|-----------------------------------|-----------------------|---|
| 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

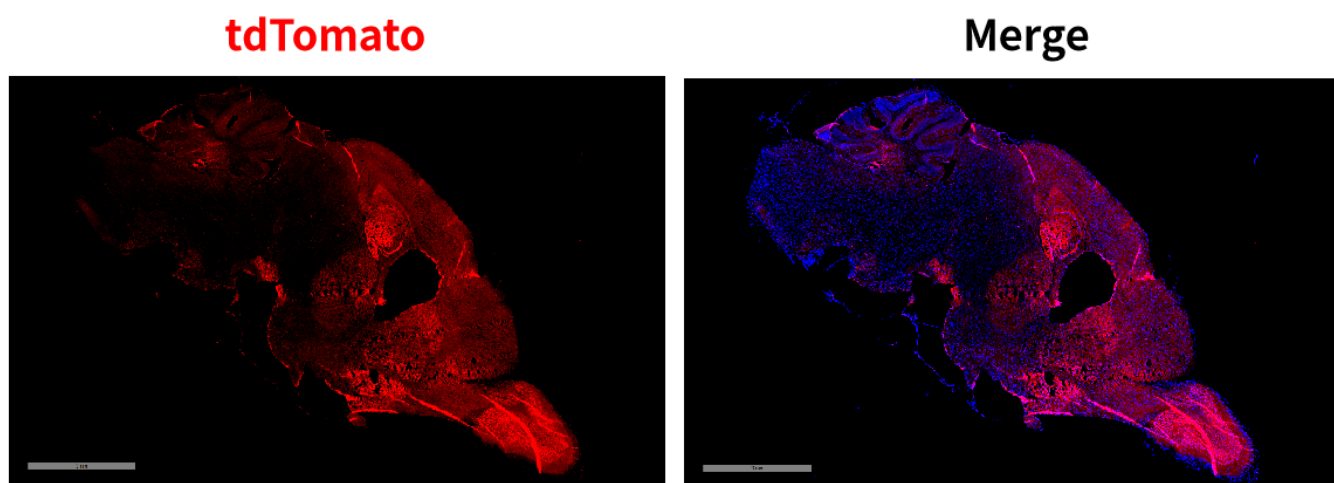


Fig. 1 Cre-mediated recombination in the brain of $Nos1^{Cre/+}$; $Rosa26^{tdTomato/+}$ mouse. TdTomato(red) expression can be detected in the olfactory bulb, cortex and hippocampus derived from $Nos1^{Cre/+}$; $Rosa26^{tdTomato/+}$ mouse.

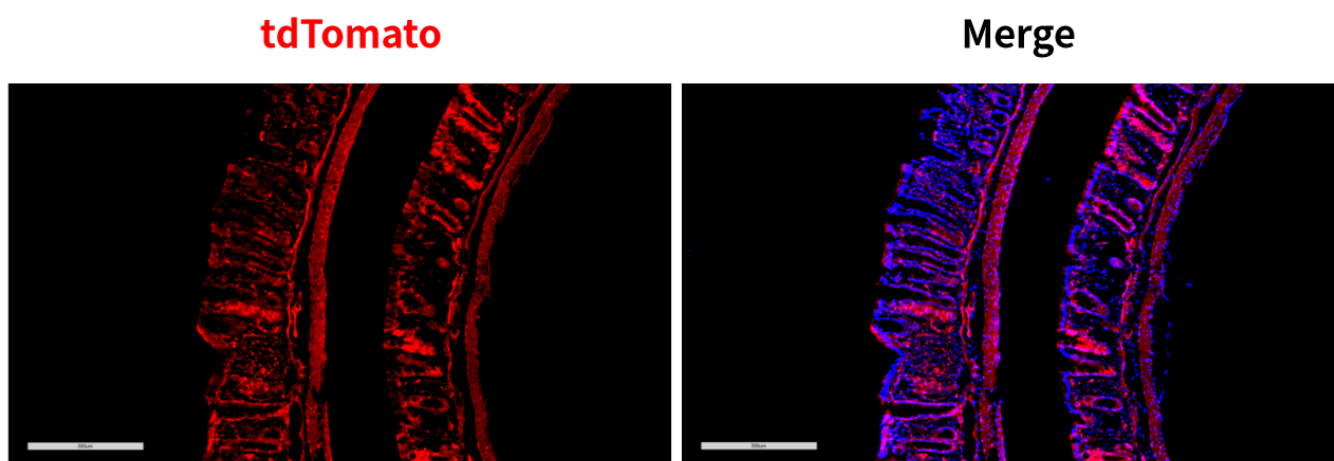


Fig. 2 Cre-mediated recombination in the large intestine of $Nos1^{Cre/+}$; $Rosa26^{tdTomato/+}$ mouse. TdTomato(red) expression can be detected in the muscular layer and mucous layer of the wall of the large intestine derived from $Nos1^{Cre/+}$; $Rosa26^{tdTomato/+}$ mouse.

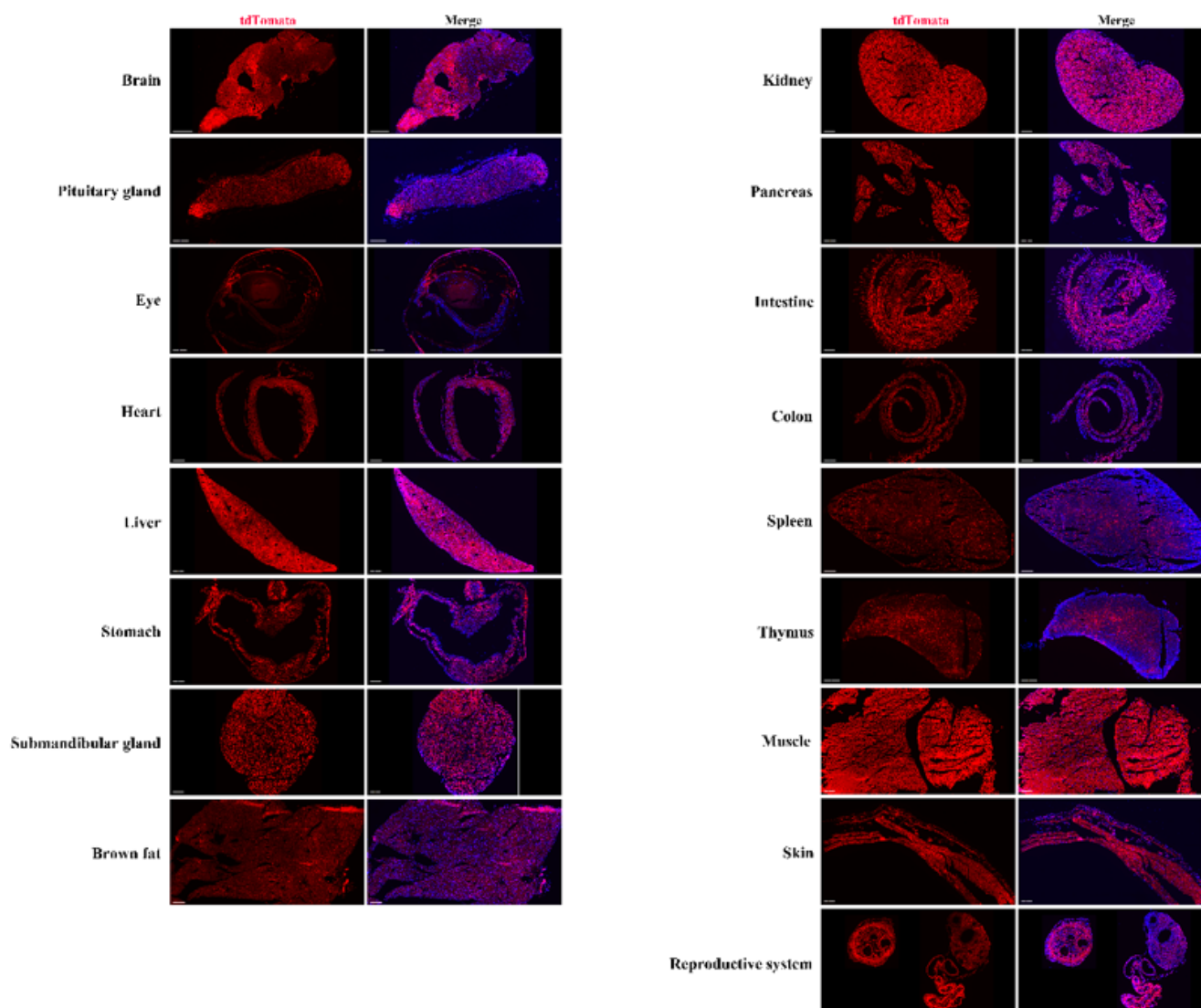


Fig. 3 Detection of tdTomato(red) in various tissues of $Nos1^{Cre/+}; Rosa26^{tdTomato/+}$ mice. Cre mediated recombination can be detected in the brain, eyes, pituitary gland, heart, liver, stomach, brown fat, kidney, pancreas, thymus, colon, spleen, skin, muscle, uterus, ovary and submandibular gland.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