

# Nos1-CreERT2

<b>Nomenclature</b>	C57BL/6Smoc- <i>Nos1</i> <sup>em1(CreERT2-SV40polyA)Smoc</sup>
<b>Cat. NO.</b>	NM-KI-200091
<b>Strain State</b>	Repository Live

## Gene Summary

<b>Gene Symbol</b> <b>Nos1</b>	<b>Synonyms</b>	NO; NOS; bNOS; nNOS; N-NOS; NOS-I; Nos-1; NC-NOS; 2310005C01Rik
	<b>NCBI ID</b>	<a href="#">18125</a>
	<b>MGI ID</b>	<a href="#">97360</a>
	<b>Ensembl ID</b>	<a href="#">ENSMUSG00000029361</a>
	<b>Human Ortholog</b>	NOS1

## Model Description

A CreERT2-SV40polyA expression cassette was knocked into the *Nos1* gene start codon site.

**Research Application:** *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 after tamoxifen treatment.

\*Literature published using this strain should indicate: *Nos1*-CreERT2 mice (Cat. NO. NM-KI-200091) were purchased from Shanghai Model Organisms Center, Inc..

## Validation Data

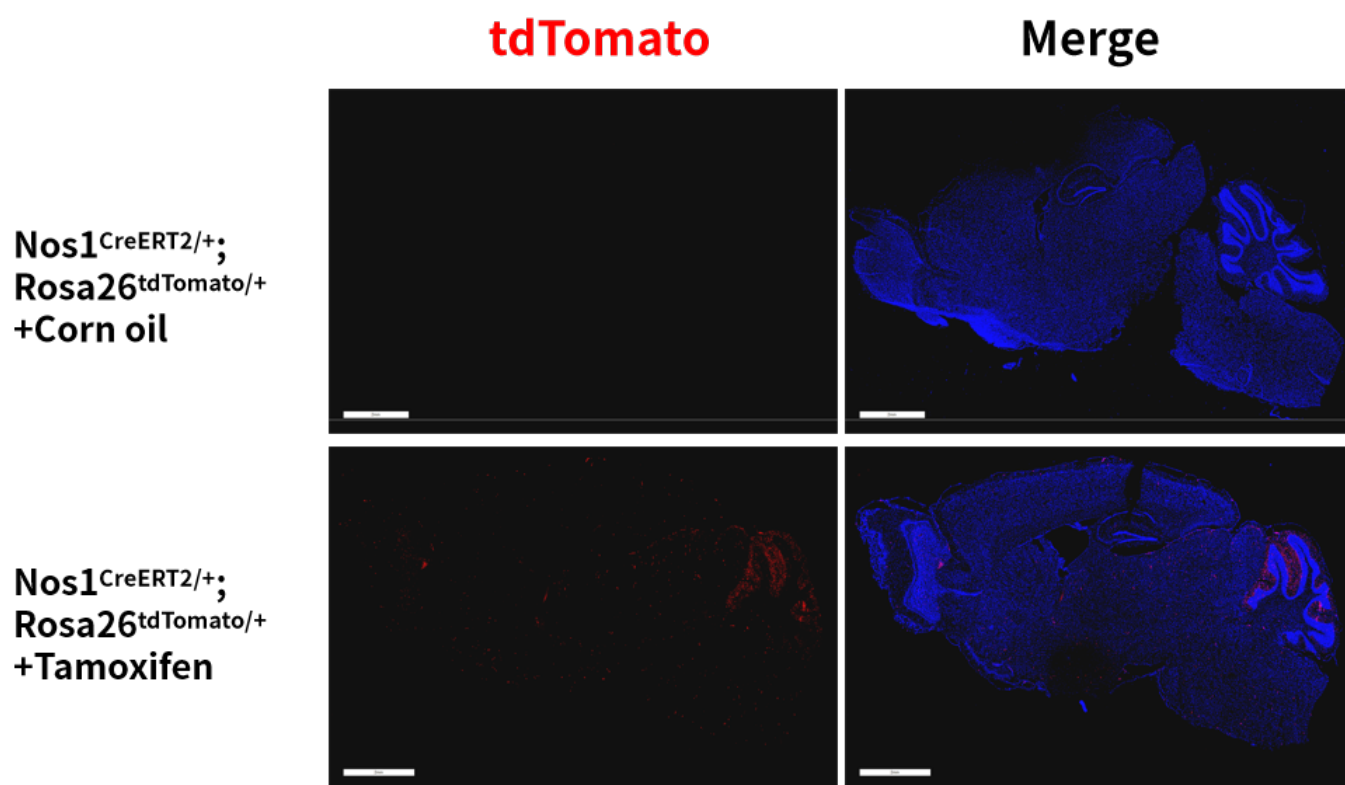


Fig. 1 CreERT2-mediated recombination in the brain of Nos1<sup>CreERT2</sup> <sup>+/+</sup>; Rosa26<sup>tdTomato</sup> <sup>+/+</sup> mouse. TdTomato(red) expression can be detected in the NOS1 positive neurons of Nos1<sup>CreERT2</sup> <sup>+/+</sup>; Rosa26<sup>tdTomato</sup> <sup>+/+</sup> mouse after tamoxifen treatment.

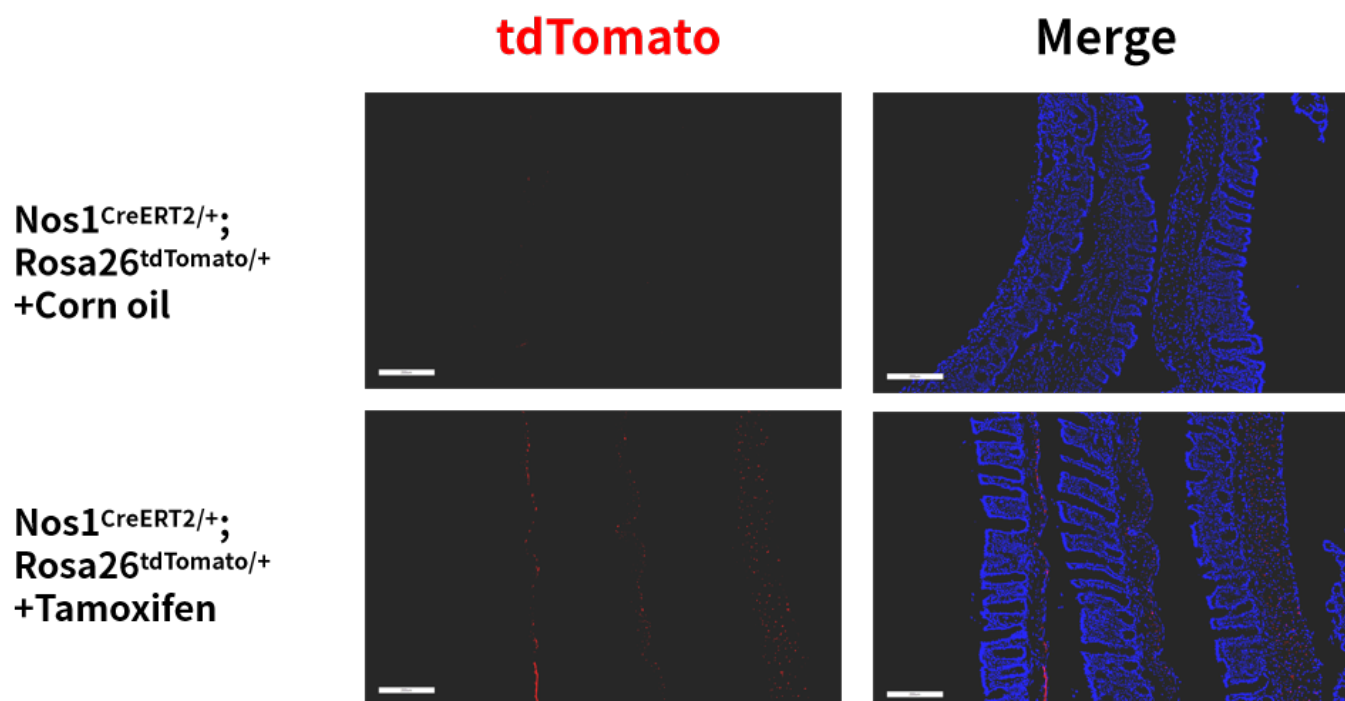


Fig. 2 CreERT2-mediated recombination in the large intestine of Nos1<sup>CreERT2</sup> <sup>+/+</sup>; Rosa26<sup>tdTomato</sup> <sup>+/+</sup> mouse. TdTomato(red) expression can be detected in the muscular layer of the wall of the large intestine derived from Nos1<sup>CreERT2</sup> <sup>+/+</sup>; Rosa26<sup>tdTomato</sup> <sup>+/+</sup> mouse after tamoxifen treatment.

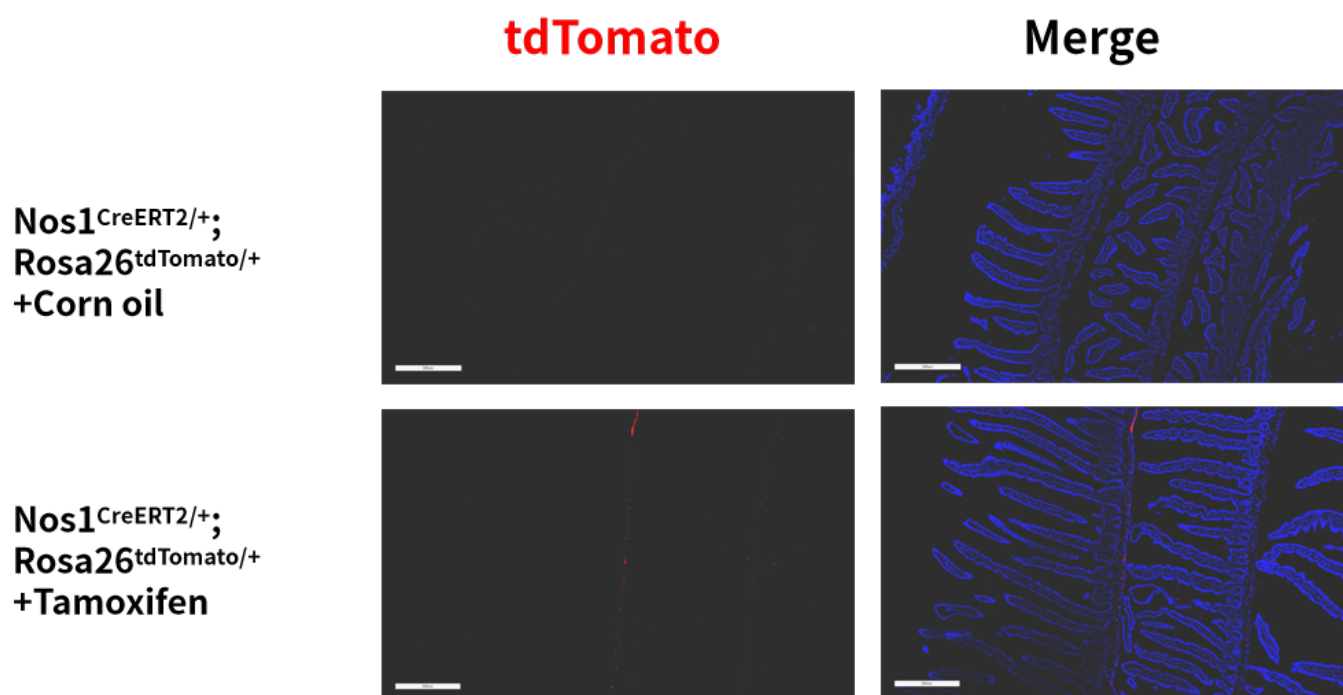


Fig. 3 CreERT2-mediated recombination in the small intestine of  $Nos1^{CreERT2/+}; Rosa26^{tdTomato/+}$  mouse. TdTomato(red) expression can be detected in the muscular layer of the wall of the small intestine derived from  $Nos1^{CreERT2/+}; Rosa26^{tdTomato/+}$  mouse after tamoxifen treatment.

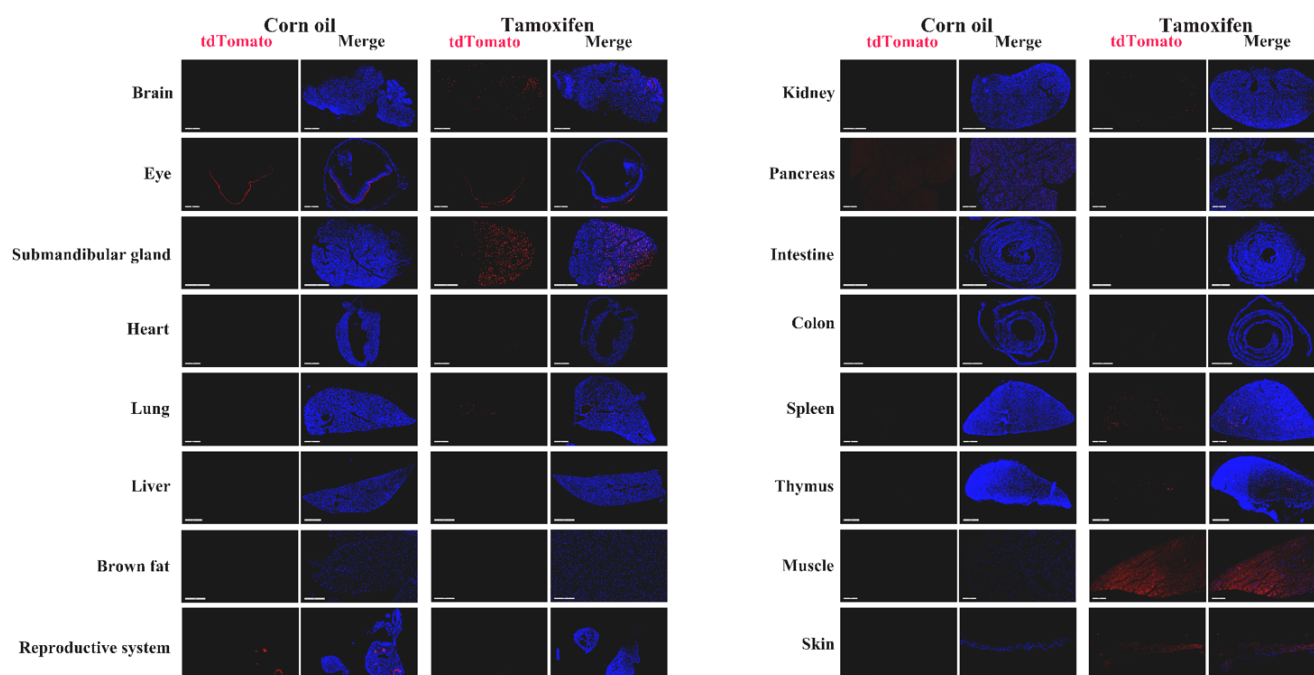


Fig. 4 Detection of tdTomato(red) in various tissues of  $Nos1^{CreERT2/+}; Rosa26^{tdTomato/+}$  mice. CreERT2 mediated recombination can be detected in some cells of the brain and intestine. Some leakiness were detected prior to tamoxifen exposure. Besides, tamoxifen-dependent cre recombinase expression can also be detected in some cells derived from eyes, lung, submandibular gland, kidney, spleen, thymus, muscle and ovary, except for heart, brown fat tissue and liver. (For more detailed information please contact our technical advisor.)

