

Opn4-Cre

Nomenclature	C57BL/6Smoc- <i>Opn4</i> ^{em1(Cre-WPRE-polyA)Smoc}
Cat. NO.	NM-KI-200304
Strain State	Repository Live

Gene Summary

Gene Symbol Opn4	Synonyms	Gm533; 1110007J02Rik
	NCBI ID	30044
	MGI ID	1353425
	Ensembl ID	ENSMUSG000000021799
	Human Ortholog	OPN4

Model Description

Cre-WPRE-polyA expression cassette was knocked into the Opn4 gene start codon site. The melanopsin gene (Opn4) encodes a functional photopigment. 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 circadian rhythm regulation.

Research Application: Cre recombinase tool; Circadian rhythm regulation

*Literature published using this strain should indicate: Opn4-Cre mice (Cat. NO. NM-KI-200304) were purchased from Shanghai Model Organisms Center, Inc..

Validation Data

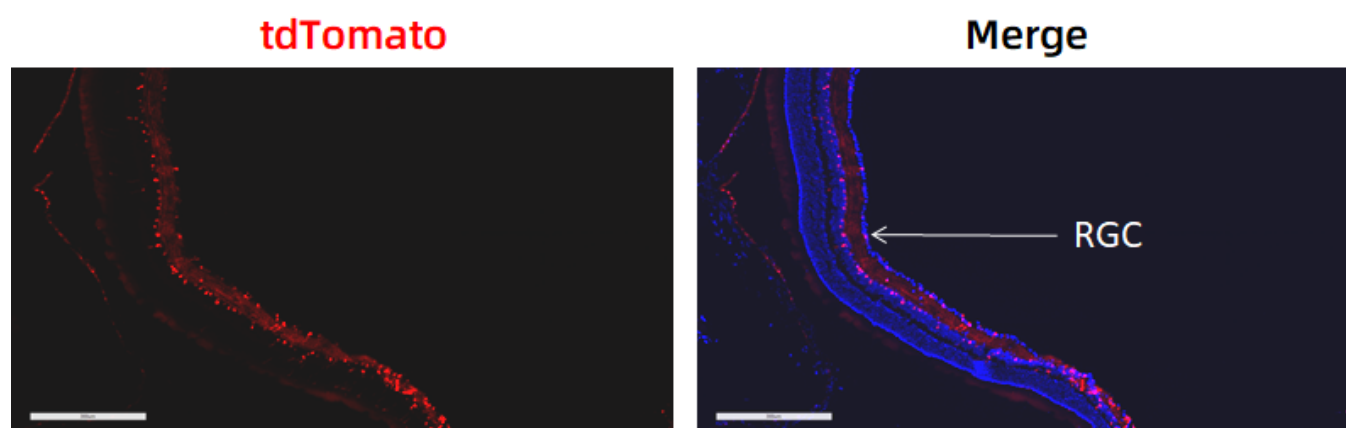


Fig. 1 Cre-mediated recombination in the eyes of $\text{Opn4}^{\text{Cre/+}}$; $\text{Rosa26}^{\text{tdTomato/+}}$ mouse. TdTomato(red) expression can be detected in retinal ganglion cell layer (RGC) and inner nuclear layer of $\text{Opn4}^{\text{Cre/+}}$; $\text{Rosa26}^{\text{tdTomato/+}}$ mouse.

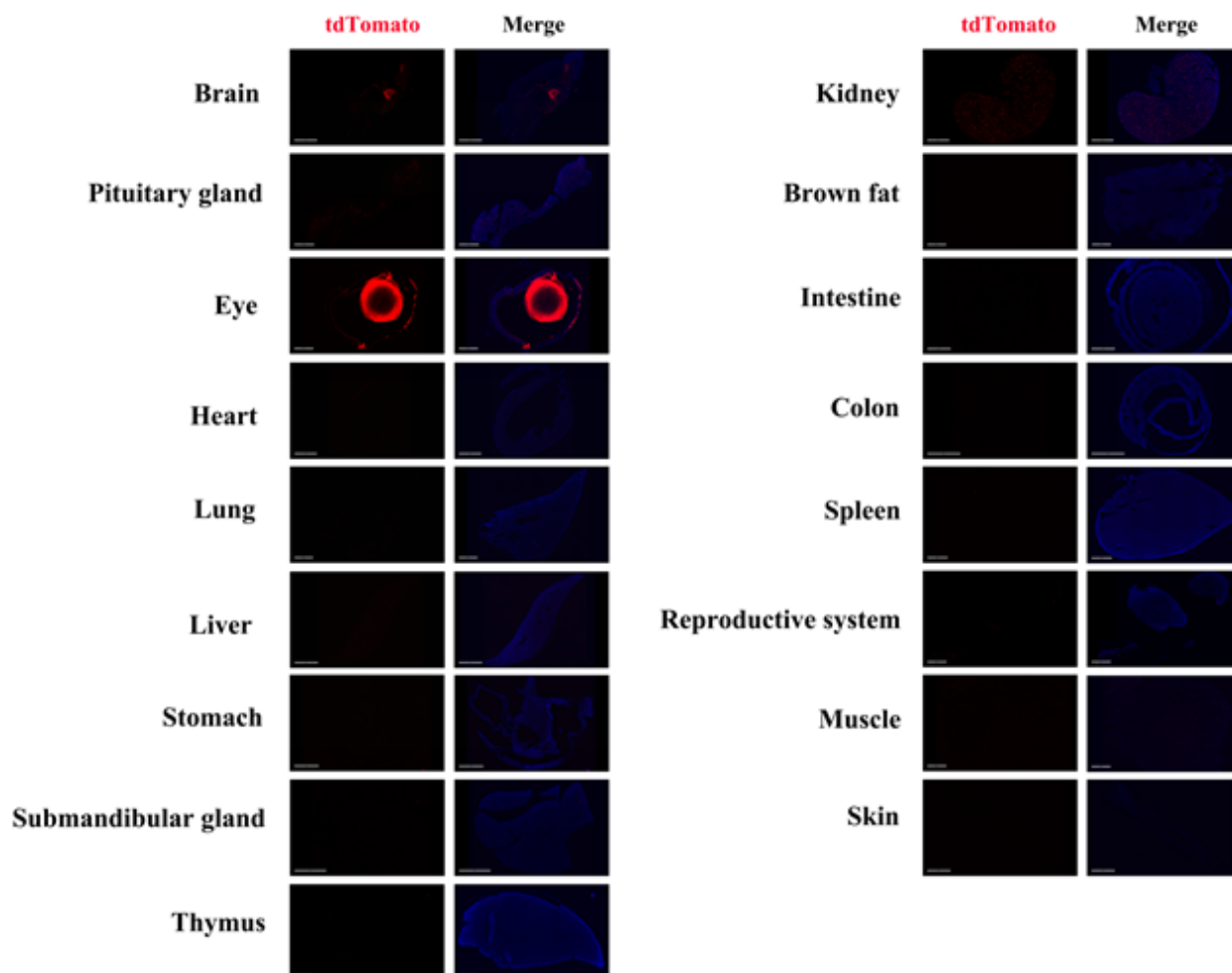


Fig. 2 Detection of tdTomato(red) in various tissues of $\text{Opn4}^{\text{Cre/+}}$; $\text{Rosa26}^{\text{tdTomato/+}}$ mice. Cre mediated recombination can be detected in the eyes, hippocampus, olfactory bulb, serous layer of the large intestine, testis, epididymis, pulmonary bronchial epithelial cells, kidney, thymus and pituitary gland. TdTomato expression can not be observed in the cerebellum, heart, liver, spleen, muscle, skin, stomach, small intestine or submandibular gland. (For more detailed information please contact our technical advisor.)