

Lgr5-EGFP-IRES-CreERT2

Nomenclature	C57BL/6Smoc- <i>Lgr5</i> ^{em1(EGFP-IRES-creERT2-WPRE-polyA)Smoc}
Cat. NO.	NM-KI-200154
Strain State	Repository Live

Gene Summary

Gene Symbol Lgr5	Synonyms	FEX; Gpr49
	NCBI ID	14160
	MGI ID	1341817
	Ensembl ID	ENSMUSG00000020140
	Human Ortholog	LGR5

Model Description

A EGFP-IRES-creERT2-WPRE-polyA expression cassette was knocked into the Lgr5 gene start codon site.

Research Application: Cre recombinase tool; Lgr5 marks stem cells in the stomach, small intestine, colon, and hair follicle, including gastric epithelial stem cells, intestinal crypt cells and hair follicle stem cells.

*Literature published using this strain should indicate: Lgr5-EGFP-IRES-CreERT2 mice (Cat. NO. NM-KI-200154) were purchased from Shanghai Model Organisms Center, Inc..

Validation Data

Fig. 1 CreERT2-mediated recombination in the stomach of Lgr5^{CreERT2/+}; Rosa26^{tdTomato/+} mouse. TdTomato(red) expression can be detected in the gastric mucosa and gastric crypt of Lgr5^{CreERT2/+}; Rosa26^{tdTomato/+} mouse. EGFP(green) expression can not be observed.

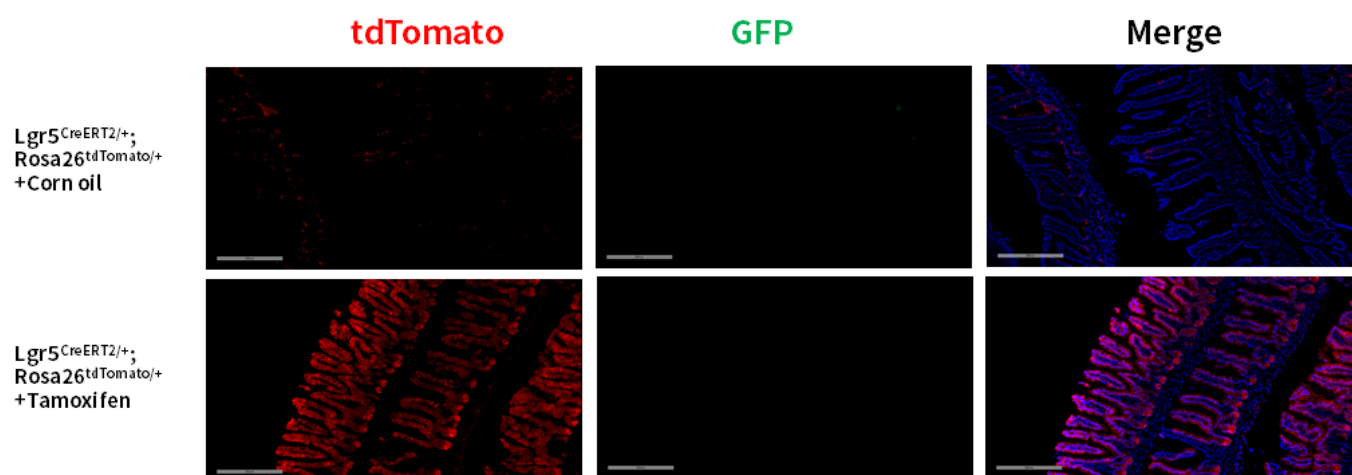


Fig. 2 CreERT2-mediated recombination in the small intestine of $Lgr5^{CreERT2/+}; Rosa26^{tdTomato/+}$ mouse. TdTomato(red) expression can be detected in the mucous membrane epithelial cells and crypt cells of small intestine derived from $Lgr5^{CreERT2/+}; Rosa26^{tdTomato/+}$ mouse. EGFP(green) expression can not be observed.

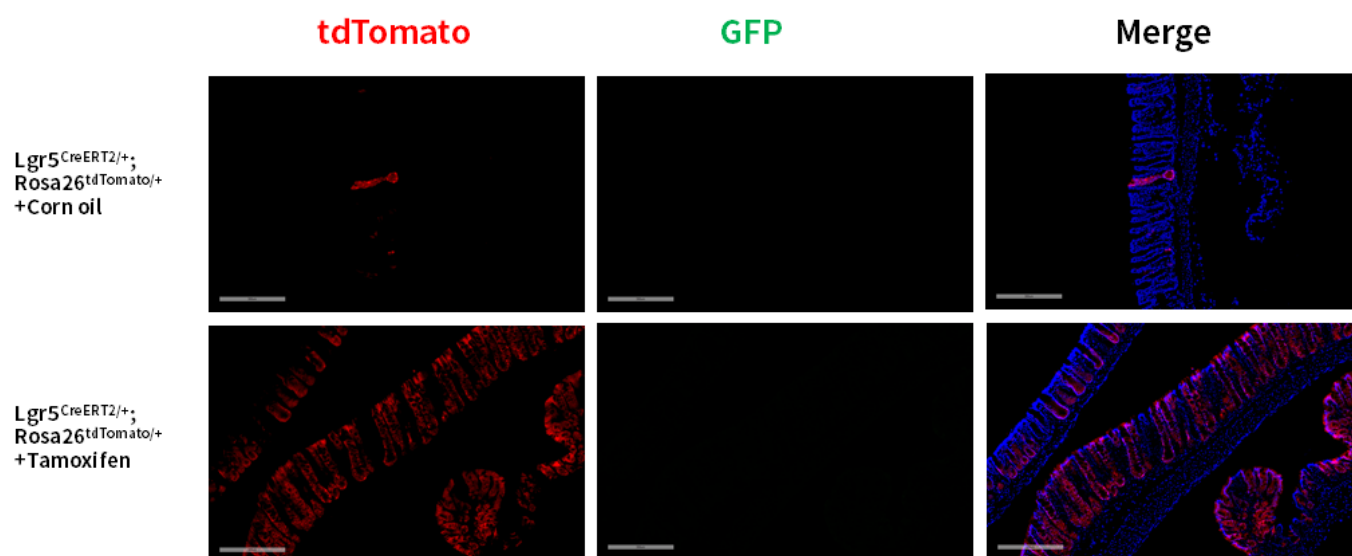


Fig. 3 CreERT2-mediated recombination in the large intestine of $Lgr5^{CreERT2/+}; Rosa26^{tdTomato/+}$ mouse. TdTomato(red) expression can be detected in the mucous membrane epithelial cells and crypt cells of large intestine derived from $Lgr5^{CreERT2/+}; Rosa26^{tdTomato/+}$ mouse. EGFP(green) expression can not be observed.

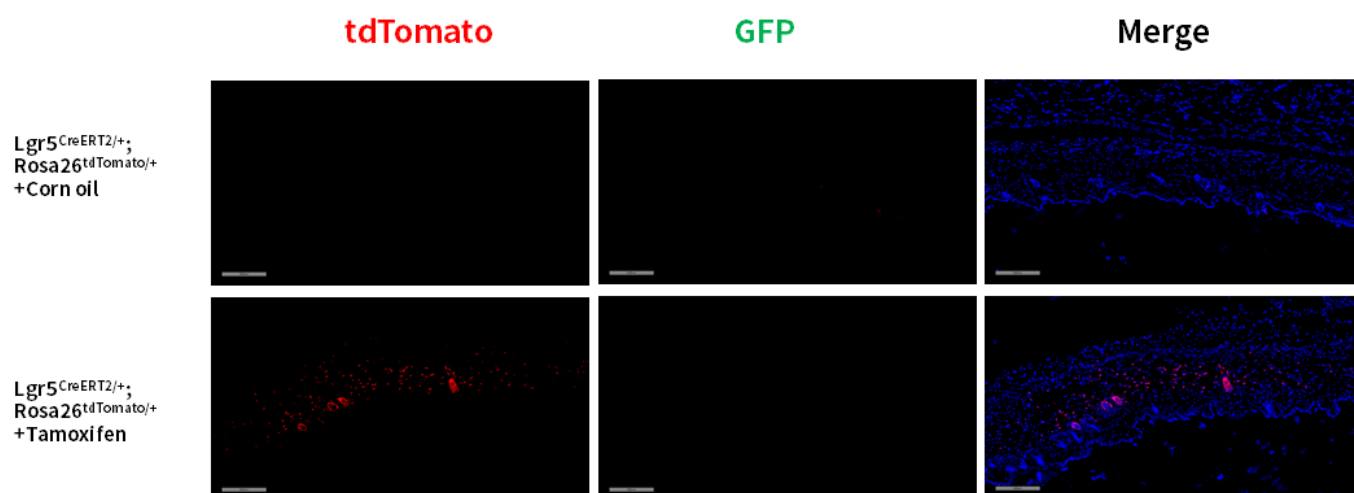


Fig. 4 CreERT2-mediated recombination in the hair follicles of $Lgr5^{CreERT2/+}; Rosa26^{tdTomato/+}$ mouse. TdTomato(red) expression can be detected in the hair follicles and individual cells of subcutaneous tissue derived from $Lgr5^{CreERT2/+}; Rosa26^{tdTomato/+}$ mouse. EGFP(green) expression can not be observed.

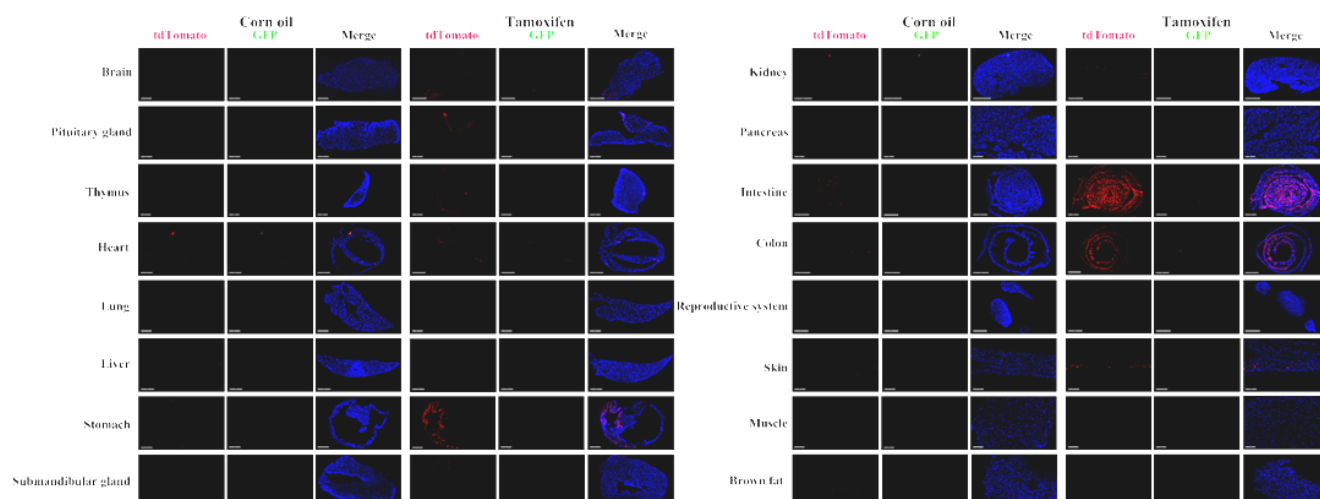


Fig. 5 Detection of tdTomato(red) and GFP(green) in various tissues of $Lgr5^{CreERT2/+}; Rosa26^{tdTomato/+}$ mice. CreERT2 mediated recombination can be detected in the glandular stomach, large intestine, small intestine and hair follicles. Some leakiness were detected prior to tamoxifen exposure. TdTomato expression can not be observed in the brain, pituitary gland, thymus, heart, lung, liver, submandibular gland, kidney, pancreas, testis, muscle and brown fat. EGFP expression can not be observed.(For more detailed information please contact our technical advisor.)

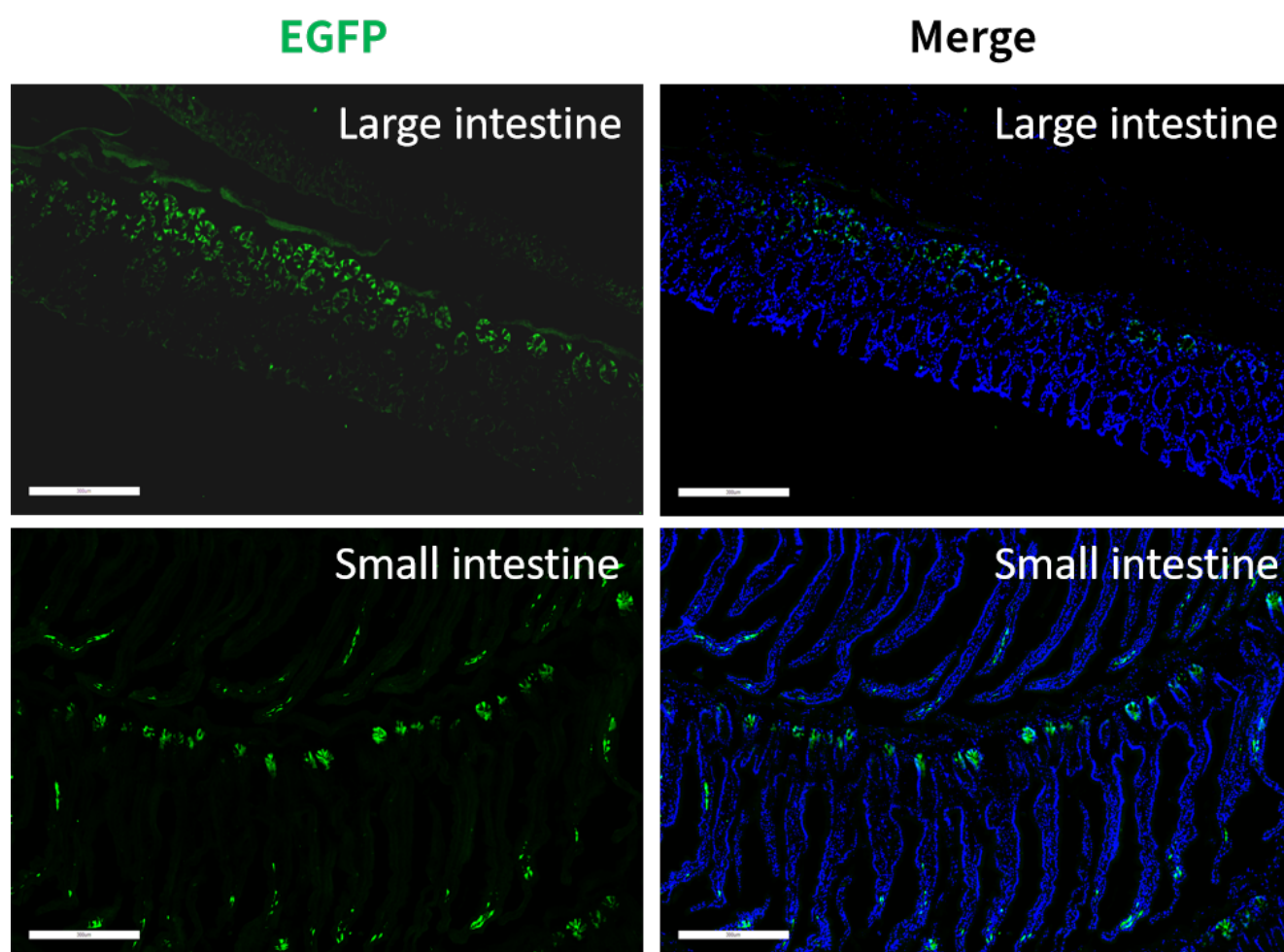


Fig. 6 The EGFP protein expression was detected in the crypt cells of intestine by immunofluorescence staining using anti-EGFP antibody.