

Acan-IRES-CreERT2

Nomenclature	C57BL/6Smoc- <i>Acan</i> ^{em1(IRES-CreERT2)Smoc}
Cat. NO.	NM-KI-200143
Strain State	Repository Live

Gene Summary

Gene Symbol Acan	Synonyms	Agc; cmd; Agc1; Cspg1; b2b183Clo
	NCBI ID	11595
	MGI ID	99602
	Ensembl ID	ENSMUSG00000030607
	Human Ortholog	ACAN

Model Description

A IRES-CreERT2 expression cassette was knocked into the Acan gene stop codon site via CRISPR/Cas9 mediated recombination.

Research Application: Cre recombinase tool; When crossed with mice carrying a targeted floxed alleles, this strain is useful in eliminating tissue-specific conditional expression of the gene. These mice could be used to study degenerative cartilage diseases such as osteoarthritis and degenerative disc disease.

*Literature published using this strain should indicate: Acan-IRES-CreERT2 mice (Cat. NO. NM-KI-200143) were purchased from Shanghai Model Organisms Center, Inc..

Validation Data

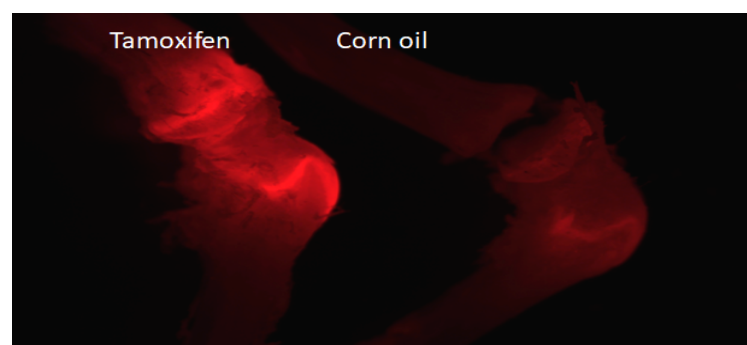


Fig. 1 CreERT2-mediated recombination in the joints of $Acan^{CreERT2/+}$; $Rosa26^{tdTomato/+}$ mouse. TdTomato(red) expression can be detected in the growth plate and articular cartilage of $Acan^{CreERT2/+}$; $Rosa26^{tdTomato/+}$ mouse after tamoxifen treatment.

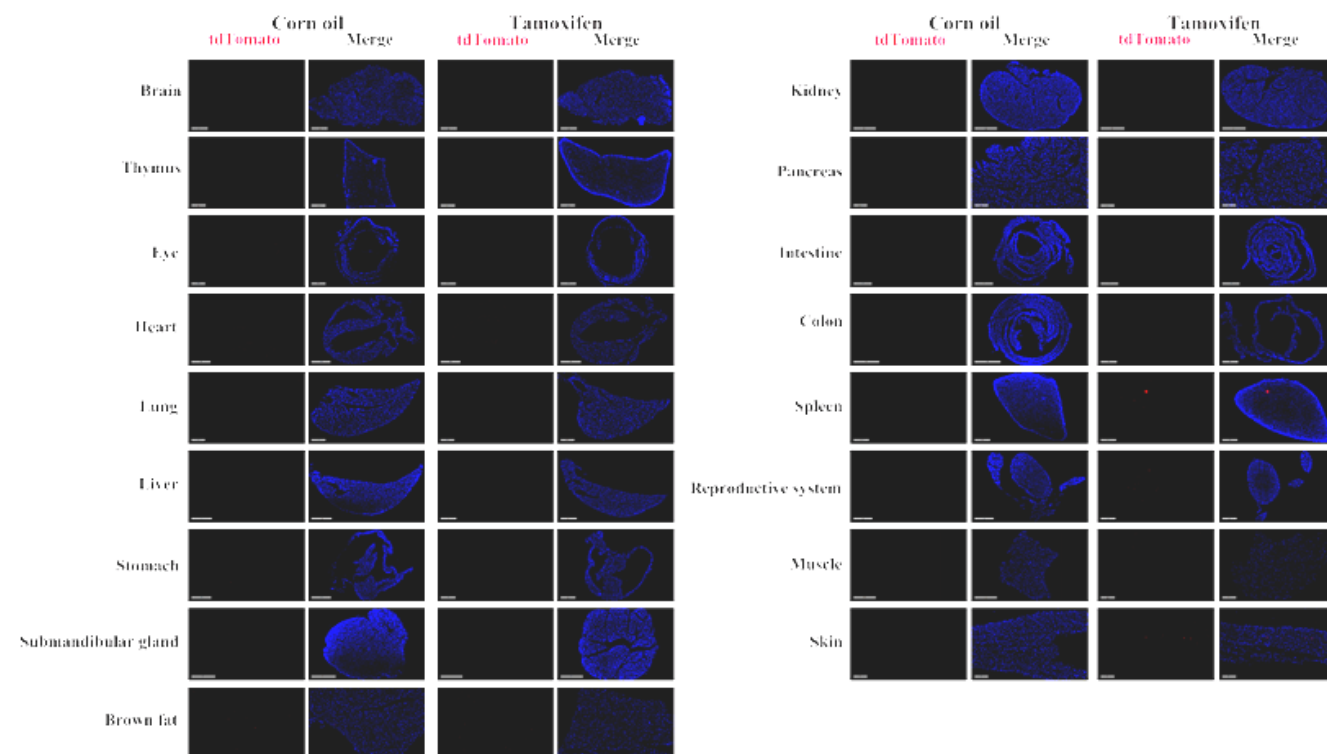


Fig. 2 Detection of tdTomato(red) in various tissues of $Acan^{CreERT2/+}$; $Rosa26^{tdTomato/+}$ mice. Cre mediated recombination can be detected in the growth plate and articular cartilage after tamoxifen treatment. Tdtomato expression can be also detected in individual cells derived from the brown fat, spleen, testis, skin, skeletal muscle and cardiac valves. Tdtomato expression can not be detected in the brain, thymus, retina, lung, liver, stomach, submandibular gland, kidney, pancreas, intestine, colon, skin and myocardium. (For more detailed information please contact our technical advisor.)