

TRM:Sox9CreER BAC Transgenic Mice

Tech ID: 30492 / UC Case 2010-132-0

BACKGROUND

These transgenic mice express an inducible version of cre recombinase mice under the direction of a Sox9 promoter. They are suitable for performing cre-recombination in pancreatic ductal cells and their progenitors.

TECHNOLOGY DESCRIPTION

Mice hemizygous for the BAC *Sox9-creER^{T2}* transgene are viable and fertile. *Cre-ER^{T2}* expression is directed by the murine SRY-box containing gene 9 (*Sox9*) promoter/enhancer regions in early pancreatic progenitor and ductal cells. Restricted to the cytoplasm, Cre-ER^{T2} can only gain access to the nuclear compartment after exposure to tamoxifen. When these mice are bred with mice containing *loxP*-flanked sequence, tamoxifen-inducible, Cre-mediated recombination will result in deletion of the floxed sequences in the cre-expressing cells of the offspring.

APPLICATIONS

Applications include the following:

- ▶ Research Tools
- ▶ Genetics Research
- ▶ Tissue/Cell Markers: pancreatic beta cells
- ▶ Cre-lox System
- ▶ Cre Recombinase Expression: Inducible

STATE OF DEVELOPMENT

The mice are designated Tangible Research Material (TRM). A complete description, including genotyping, phenotyping, etc is found at The Jackson Lab cat. No. 018829 <https://www.jax.org/strain/018829>

INTELLECTUAL PROPERTY INFO

Academic and non-profit institutions please order directly from The Jackson Laboratory. Commercial entities require a license from UC San Diego contact (<https://innovation.ucsd.edu/contact/>).

RELATED MATERIALS

- ▶ Kopp JL, Dubois CL, Schaffer AE, Hao E, Shih HP, Seymour PA, Ma J, Sander M. Sox9+ ductal cells are multipotent progenitors throughout development but do not produce new endocrine cells in the normal or injured adult pancreas. *Development*. 2011 Feb;138(4):653-65. doi: 10.1242/dev.056499. - 02/15/2011

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OTHER INFORMATION

KEYWORDS

Bacterial artificial chromosome, Sox9,
CRE recombinase, transgene,
pancreas, transgenic mice

CATEGORIZED AS

- ▶ **Agriculture & Animal Science**
 - ▶ Transgenics
- ▶ **Materials & Chemicals**
 - ▶ Biological
- ▶ **Medical**
 - ▶ Research Tools
- ▶ **Research Tools**
 - ▶ Animal Models

RELATED CASES

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