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**
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RELATED CASES

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