



VE-cadherin-CreERT2 Transgenic Mouse

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INNOVATION

To introduce temporal control in genetic experiments targeting the endothelium, we established a mouse line expressing tamoxifen-inducible Cre-recombinase (Cre-ERT2) under the regulation of the vascular endothelial cadherin promoter (VECad). Specificity and efficiency of Cre activity was documented by crossing VECad-Cre-ERT2 with the ROSA26R reporter mouse, in which a floxed-stop cassette has been placed upstream of the -galactosidase gene. We found that tamoxifen specifically induced widespread recombination in the endothelium of embryonic, neonatal, and adult tissues. Recombination was also documented in tumor-associated vascular beds and in postnatal angiogenesis assays. Furthermore, injection of tamoxifen in adult animals resulted in negligible excision (lower than 0.4%) in the hematopoietic lineage. The VECad-Cre-ERT2 mouse is likely to be a valuable tool to study the function of genes involved in vascular development, homeostasis, and in complex processes involving neoangiogenesis, such as tumor growth.

APPLICATIONS

- Research tool to study the function of genes involved in vascular development, homeostasis, and in complex processes involving neoangiogenesis, such as tumor growth.

RELATED MATERIALS

- [VE-cadherin-CreERT2 Transgenic Mouse: A Model for Inducible Recombination in the; Endothelium, Developmental Dynamics 235 \(12\): 3413-22](#)

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INVENTORS

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OTHER INFORMATION

KEYWORDS

Mouse model, research tool, ERT2, estrogen receptor ligand-binding domain. Vascular endothelial cadherin, VECadherin, CD-144, cadherin-5, endothelial

CATEGORIZED AS

- **Medical**
 - [Diagnostics](#)
 - [Therapeutics](#)
- **Research Tools**
 - [Animal Models](#)

RELATED CASES

2010-706-0

ADDITIONAL TECHNOLOGIES BY THESE INVENTORS

- [Transgenic Mice for Endothelial Cell Research \(Ve-Cadherin Cre-Recombinase - Rosa26r-LacZ\)](#)
- [Dual Transgenic Mice for Endothelial Cell Research \(Ve-Cadherin Cre-Recombinase - Rosa26r-YFP\)](#)
- [Floxed Mouse for Progesterone Receptor \(PRCE\)](#)
- [VE-Cadherin-Cre-recombinase Transgenic Mouse](#)

