Mouse Model for Conditional Knockout of the PTEN Gene

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BACKGROUND

PTEN has been shown to be central in the regulation of cellular growth and survival. In many forms of cancer, mutations or loss of function in PTEN results in tumor formation - and as such PTEN is now appreciated as a central player in tumor suppression. Furthermore, PTEN has been shown to have a modulating role on cellular functions other than growth and survival, implicating this protein in diseases such as diabetes. Therefore, examination of PTEN in other models of disease may provide insight towards the understanding of mechanism and treatment of these diseases.

INNOVATION

UCLA Researchers have developed a mouse model in which the PTEN gene can be conditionally knocked out. This model can be applied to inhibit the expression of PTEN via crossing of mice bearing tissue or condition-specific expression of the CRE-recombinase, allowing for subsequent conditional ablation of PTEN expression.

APPLICATIONS

- Examination of the role of PTEN expression in any mouse model where CRE-recombinase can be conditionally expressed

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INVENTORS

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OTHER INFORMATION

KEYWORDS

PTEN, conditional knockout research tool

CATEGORIZED AS

- **Biotechnology**
  - Health
- **Medical**
  - Research Tools
  - Screening
- **Research Tools**
  - Animal Models

RELATED CASES

2008-020-0

ADDITIONAL TECHNOLOGIES BY THESE INVENTORS

- A Method for In Vivo Visualization of Mutated Mouse Cells

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