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## Tcl1 Transgenic Mice

Tech ID: 20525 / UC Case 2002-274-0

### BACKGROUND

TCL1 is a protooncogene overexpressed in many mature B cell lymphomas. TCL1 is also expressed in precursor T cells and absent by the CD4+ CD8+ stage of thymocyte development. In B cells, TCL1 is first expressed in pro-B cells, and is completely absent in memory B cells and plasma cells.

### INNOVATION

UCLA researchers have developed a murine model in which a TCL1 transgene is overexpressed in both B and T cells. These transgenic mice develop Burkitt-like lymphoma and diffuse large B cell lymphoma at 4 months. This phenotype is accompanied by attendant Bcl-6 expression and mutated JH antibody gene segments. Interestingly, TCL1 is a more powerful initiator of B cell malignancies when compared to the low frequency of T cell malignancies with this model. This is mirrored in humans as >85% of human immune system malignancies are B cell derived.

### APPLICATIONS

- ▶ Mouse model for immune system malignancies in B, T and granulocytes cells.
- ▶ Mouse model for B-cell selection, development, maturation, antibody production and signaling responses through PI3-kinase pathways.
- ▶ Mouse model for designing therapeutics against B-cell malignancies and preventing autoantibody production in autoimmune diseases.

### RELATED MATERIALS

- ▶ [Dysregulated TCL1 Promotes Multiple Classes of Mature B Cell Lymphoma. \*Proc Natl Acad Sci U S A.\* \(2002\)](#)

### OTHER INFORMATION

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### INVENTORS

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### OTHER INFORMATION

#### KEYWORDS

research tools, mouse model, immunity

#### CATEGORIZED AS

- ▶ **Medical**
  - ▶ Disease: Autoimmune and Inflammation
  - ▶ Research Tools
- ▶ **Research Tools**
  - ▶ Animal Models

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2002-274-0

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