

STOCK Tg(Cebpb-tTA)5Bjd/J

Stock No: 003272

 Transgenic

Please contact Technical Support for more information

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Donating Investigator

Dr. Hermann Bujard, Universität Heidelberg

R E A D M O R E +

GENETIC OVERVIEW

Genetic Background

Generation

Tg(Cebpb-tTA)5Bjd

Alele Type

Transgenic (Transactivator)

V I E W G E N E T I C S

RESEARCH APPLICATIONS

V I E W A L L R E S E A R C H A P P L I C A T I O N S

– Detailed Description

The tet regulatory system in which doxycycline (dox) acts as an inducer of specifically engineered RNA polymerase II promoters was transferred into transgenic mice. Administration of dox rapidly induces the synthesis of the indicator enzyme luciferase whose activity rises several orders of magnitude over a period of hours. A comparable regulatory potential exists in the tet regulatory system where dox prevents transcription activation. Both the rtTA and the tTA systems provide true genetic switches capable of quantitatively controlling individual gene activities in animals in a highly tissue-specific manner providing proper combinations of promoter and chromosomal integration sites are met. This is a mouse line where tetracycline controlled transactivators are synthesized tissue-specifically in the liver. Directing the synthesis of the tetracycline-controlled transactivator (tTA) to the liver leads to highly specific regulation in hepatocytes where, in the presence of dox, less than one molecule of luciferase is detected per cell, in contrast to more than 10^5 -fold of luciferase in the absence of the antibiotic. Dox concentration may be controlled via administration in the water supply of the animals.

+ Development

+ Expression Data

+ Control Suggestions

+ Selected References

– Genetics

+ Tg(Cebpb-tTA)5Bjd

– Disease/Phenotype

+ Disease Terms

+ Research Areas By Phenotype

+ Mammalian Phenotype Terms by Genotype

+ References

– Technical Support

Genotyping Protocols

Standard PCR: [Tg\(Cebpb-tTA\)5Bjd](#)

Probe: [Generic tTA/rtTA](#)

QPCR: [Tg\(tTA\)](#)

Standard PCR: [Tg\(tTA\)](#)

Standard PCR: [Tg\(tTA\)](#)

[Genotyping resources and troubleshooting](#)

Mating System

+/+ sibling x Hemizygote

Appearance

white-bellied agouti

Related Genotype: $A^W/?$

black

Related Genotype: a/a

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