

**STOCK Tg(Hoxb7-rtTA\*M2)RS40BCos/Mmjax**MMRRC Stock No: **36718-JAX** **Transgenic**[ORDER AT MMRRC JAX](#)[Email](#) [Download PDF](#) [Help](#)

of the reverse tetracycline-controlled transactivator (rtTA\*M2) protein. These mice may be useful for the inducible expression of genes throughout the Wolffian duct, ureteric bud (UB) epithelium, and developing kidney.

**Donating Investigator**

Frank Costantini, Columbia University Medical Center

[R E A D M O R E +](#)**GENETIC OVERVIEW****Genetic Background****Generation****Tg(Hoxb7-rtTA\*M2)RS40BCos****Alele Type**

Transgenic (Transactivator)

[V I E W G E N E T I C S](#)**RESEARCH APPLICATIONS**

Research Tools

[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](#)

## Details

### Detailed Description

rtTA-2SM2 transgenic mice have the homeobox B7 promoter/enhancer sequences driving expression of an optimized form of the reverse tetracycline-controlled transactivator (rtTA\*M2) protein. Hemizygotes are viable and fertile. When mated to a second transgenic strain carrying a gene of interest under the regulatory control of a tetracycline-responsive promoter element (tetO), expression of the gene of interest may be regulated by the tetracycline analog, doxycycline (dox). In the presence of dox, transcription of the target gene is induced in cells where rtTA is expressed. When bred to B6;SJL-Tg(tetop-lacZ)2Mam/J mice, adult mice carrying both transgenes, which were maintained on Dox during pre and postnatal life, show strong expression of beta-gal in the renal collecting duct system, and embryos display strong expression throughout the Wolffian duct, ureteric bud, vas deferens, epididymis and seminal vesicles. These mice may be useful for the inducible expression of genes throughout the Wolffian duct, ureteric bud (UB) epithelium, and developing kidney.

### Development

### Expression Data

### Control Suggestions

### Selected References

## Genetics

### Tg(Hoxb7-rtTA\*M2)RS40BCos

## Disease/Phenotype

### Disease Terms

### Research Areas By Phenotype

### Mammalian Phenotype Terms by Genotype

### References

## Technical Support

### CONTACT TECHNICAL SUPPORT

#### Genotyping Protocols

Standard PCR: [Tg\(Hoxb7-rtTA\\*M2\)RS40BCos](#)

Separated PCR: [Generic rtTA Advanced](#)

[Genotyping resources and troubleshooting](#)

#### Breeding Considerations

When maintaining a live colony, hemizygous mice may be bred to wildtype (non-carrier) mice from the colony. The donating investigator indicates that the C57BL/6 background may cause silencing of the transgene.

[Additional Breeding and Husbandry Support](#)

#### Citation

When using the STOCK Tg(Hoxb7-rtTA\*M2)RS40BCos/Mmjax mouse strain in a publication, please [cite the originating article\(s\)](#) and include MMRRC stock #36718 in your Materials and Methods section.

#### Animal Health Reports

[Facility Barrier Level Descriptions](#)

*Production of mice from cryopreserved embryos or sperm occurs in a maximum barrier room, G200*

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