B6N.B6-Tg(GAPDH-OTC/CAT)6424Prab/J

Stock No: 030712 | mCAT

Genetic Background

NpB1
(2018-03-13 00:00:00)

Allele Type
Transgenic (Conditional ready (e.g. floxed), Inserted expressed sequence, Humanized sequence)

Also Known As: mCAT
mCAT transgenic mice have a mitochondrial targeted human catalase (CAT) gene directed by the human glyceraldehyde-3-phosphate dehydrogenase (GAPDH) promoter/enhancer regions on a BAC transgene. These mice may be useful for studying mitochondrial production of reactive oxygen species.

VIEW GENETICS

RESEARCH APPLICATIONS
Research Tools
Metabolism Research

VIEW ALL RESEARCH APPLICATIONS

BASE PRICE
Details

Detailed Description

mCAT transgenic mice have a mitochondrial targeted human catalase (CAT) gene, mCAT, directed by the human glyceraldehyde-3-phosphate dehydrogenase (GAPDH) promoter/enhancer regions on a BAC transgene. A loxP-flanked STOP cassette prevents transcription of the downstream mCAT gene. Hemizygous mice are viable and fertile. Catalase is an enzyme, normally expressed in peroxisomes, that reduces hydrogen peroxide \( (\text{H}_2\text{O}_2) \) to water and molecular oxygen, mitigating the potential for \( \text{H}_2\text{O}_2 \) to cause damage to molecules. Cre-mediated recombination results in deletion of the floxed STOP cassette and subsequent expression of mCAT the mitochondria of cre-expressing cells.

Development

Expression Data

Control Suggestions

Selected References

Genetics

Tg(GAPDH-OTC/CAT)6424Prab

Disease/Phenotype

Disease Terms

Research Areas By Genotype

Mammalian Phenotype Terms by Genotype

References

Technical Support
Genotyping Protocols

MELT: Tg(GAPDH-OCT/CAT)6424Prab
Genotyping resources and troubleshooting

Breeding Considerations

When maintaining a live colony, hemizygous mice may be bred to wildtype (non-carrier) mice from the colony or to C57BL/6NJ inbred mice (Stock No. 005304). The donating investigator has not attempted to make this strain homozygous.
Additional Breeding and Husbandry Support

Mating System

Noncarrier x Hemizygote
Hemizygote x Noncarrier

Citation

When using this mouse strain in a publication, please cite the originating articles and include JAX stock #030712 in your Materials and Methods section.

Animal Health Reports

AX18 (Maximum)

PRICING & AVAILABILITY

3–6 week average lead time depending on quantity and age requests are not accepted

| Repository Live |

**Domestic**

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<thead>
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<th>AGE</th>
<th>SEX</th>
<th>GENOTYPE</th>
<th>PRICE</th>
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<td>Hemizygous for Tg(GAPDH-OCT/CAT)6424Prab</td>
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**Breeder Pair**

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