Overview

Also Known As: apoE-; TRX80

In this strain, a truncated form of human thioredoxin (TRX80) is expressed in macrophages and is combined with the Apoe KO.
(ApoE<sup>tm1Unc</sup>) allele. These mice may be useful for studying Alzheimer’s disease and atherosclerosis.

**Donating Investigator**

Alan Remaley, NHLBI

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**GENETIC OVERVIEW**

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
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<tbody>
<tr>
<td>Apoe&lt;sup&gt;tm1Unc&lt;/sup&gt;</td>
<td></td>
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<tr>
<td>Tg(MSR1-TXN*)23Arem</td>
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<tr>
<th>Allele Type</th>
<th>Gene Symbol</th>
<th>Gene Name</th>
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<tbody>
<tr>
<td>Targeted (Null/Knockout)</td>
<td>Apoe</td>
<td>apolipoprotein E</td>
</tr>
<tr>
<td>Transgenic (Inserted expressed sequence)</td>
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**RESEARCH APPLICATIONS**

Neurobiology Research  
Cardiovascular Research  
Mouse/Human Gene Homologs

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**Details**

**Detailed Description**

TRX80 transgenic mice express a truncated form of the human thioredoxin TXN gene under the control of the human macrophage scavenger receptor (MSR1) enhancer/promoter. TXN is a dithiol reductant and antioxidant involved in the development of atherosclerosis and Alzheimer’s disease. The truncated form of TXN, TRX80, localizes to neurons and inhibits amyloid-beta aggregation. TRX80 levels are decreased in the brains of Alzheimer’s patients.

In this strain, the TRX80 transgene is expressed in macrophages and is combined with the Apoe KO (ApoE<sup>tm1Unc</sup>) allele. APOE expression is associated with amyloid beta deposition. This strain may be useful for studying Alzheimer’s disease and atherosclerosis.

**Development**

**Expression Data**
Control Suggestions

Genetics

Apoelunc

Tg(MSR1-TXN*)23Arem

Disease/Phenotype

Disease Terms

Research Areas By Genotype

Mammalian Phenotype Terms by Genotype

References

Technical Support

CONTACT TECHNICAL SUPPORT

Genotyping Protocols
High Resolution Melting: Apoe<sup>elunc</sup>
High Resolution Melting: Tg(MSR1-TXN*)23Arem
Genotyping resources and troubleshooting

Breeding Considerations
While maintaining a live colony, these mice are bred as homozygous for both alleles.
Additional Breeding and Husbandry Support

Citation
When using the apoelunc TBRX mouse strain in a publication, please cite the originating article(s) and include MMRRC stock #37627 in your Materials and Methods section.

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

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Related Strains

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All Related Strains