B6.129P2-Apoe<sup>tm1Unc/J</sup>

**Stock No:** 002052 | ApoE KO

- Congenic Targeted Mutation

- **READILY AVAILABLE**

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**PLACE ORDER**

Sized to accommodate orders of up to 100 or more. Ask Customer Service for details.

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**Overview**
Also Known As: ApoE KO
Mice homozygous for the Apoe<sup>tm1Unc</sup> mutation show a marked increase in total plasma cholesterol levels that are unaffected by age or gender. Fatty streaks in the proximal aorta are found at three months of age. The lesions increase with age and progress to lesions with less lipid but more elongated cells, typical of a more advanced stage of pre-atherosclerotic lesion.

Donating Investigator
Dr. Nobuyo Maeda, University of North Carolina at Chapel Hill

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**GENETIC OVERVIEW**

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
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<tr>
<th>Apoe&lt;sup&gt;tm1Unc&lt;/sup&gt;</th>
<th>Gene Symbol</th>
<th>Gene Name</th>
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<tr>
<td>Targeted (Null/Knockout)</td>
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<td>apolipoprotein E</td>
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**RESEARCH APPLICATIONS**

- Neurobiology Research
- Diabetes and Obesity Research
- Cardiovascular Research
- Mouse/Human Gene Homologs
- Research Tools
- Metabolism Research
Details

Detailed Description
Mice homozygous for the Apoe<sup>tm1Unc</sup> mutation show a marked increase in total plasma cholesterol levels that are unaffected by age or sex. Fatty streaks in the proximal aorta are found at 3 months of age. The lesions increase with age and progress to lesions with less lipid but more elongated cells, typical of a more advanced stage of pre-atherosclerotic lesion. Moderately increased triglyceride levels have been reported in mice with this mutation on a mixed C57BL/6 x 129 genetic background. Aged apoE-deficient mice (>17 months) have been shown to develop xanthomatous lesions in the brain consisting mostly of crystalline cholesterol clefts, lipid globules, and foam cells. Smaller xanthomas were seen in the choroid plexus and ventral fornix. Additional studies indicate that apoE-deficient mice have altered responses to stress, impaired spatial learning and memory, altered long term potentiation, and synaptic damage.

Development

Control Suggestions

Selected References

Genetics

Apoe<sup>tm1Unc</sup>

Disease/Phenotype

Disease Terms

Research Areas By Genotype

Mammalian Phenotype Terms by Genotype

Phenotype Information

References
### Genotyping Protocols
- High Resolution Melting: Apoe<sup>tm1Unc</sup>
- Standard PCR: Apoe<sup>tm1Unc</sup>
- Genotyping resources and troubleshooting

### Dietary Information
LabDiet® 5K52 formulation (6% fat)

### Breeding Considerations
- **This strain is a good breeder.**
- Additional Breeding and Husbandry Support

### Mating System
Homozygote x Homozygote

### Appearance
- black
- Related Genotype: a/a

### Citation
When using this ARSECG mouse strain in a publication, please cite the originating article(s) and include JAX stock #002052 in your Materials and Methods section.

#### Facility Barrier Level Descriptions
- MP14 (Maximum)
- RB15 (Maximum)

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### Pricing & Availability
Sized to accommodate orders of up to 100 or more. Ask Customer Service for details.

#### Live Mouse

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Pricing effective for USA, Canada and Mexico shipping destinations.
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