MOLF/EiJ, MOLF/RkJ and MOLF/DnJ were derived from wild mice trapped in Kyushu, Japan. MOLF carries a Tlr3 variant that results in hypo-responsiveness to poly(I:C) stimulation. Wild-derived mice are genetically distinct from common laboratory mice for a number of complex phenotypic characteristics and are valuable tools for genetic mapping, evolution and systematics research.

GENETIC OVERVIEW

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<th>Genetic Background</th>
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RESEARCH APPLICATIONS

- Research Tools
- Sensorineural Research
- Metabolism Research
- Immunology, Inflammation and Autoimmunity Research
- Mouse/Human Gene Homologs

BASE PRICE

Starting at:

$236.78 Domestic price for female 4-week
Important Note
This strain is homozygous for the retinal degeneration allele *Pde6b<sup>rd1</sup>.*

Detailed Description

MOLF/EiJ, MOLD/RkJ and MOLG/DnJ were derived from wild mice trapped in Kyushu, Japan. Stephan et. al. reported that wild-derived strains, MOLF, CZECH (Stock No. 001144) and MSM (Stock No. 003719), exhibit decreased secretion of TNF in response to stimulation by poly(I:C) (a synthetic analog of double-stranded RNA), the result of a P369L substitution in *Tlr3.* Response to *Tlr2,* *Tlr4* and *Tlr7*-agonists is normal.

A 7 base pair deletion was reported in the *Cd4* 5’ untranslated region of MOLF/EiJ (Wade et al. 1993, Capparelli et al. 2004). Subsequent testing at The Jackson Laboratory indicated that MOLC/EiJ, MOLD/EiJ and MOLG/EiJ also carry the variant sequence. The deletion is not believed to affect gene expression.

Wild-derived mice are genetically distinct from common laboratory mice for a number of complex phenotypic characteristics and are valuable tools for genetic mapping, evolution and systematics research.

In 2019-2020, researchers at The Jackson Laboratory discovered this inbred strain contains the *Trem2<sup>S148E</sup>* allele - a naturally occurring variant at position 48351151-48351152 on Chr 17 (*rs108080490* and *rs107649577*; Ensembl GRCm38.p6). This TC to GA transition results in a serine to glutamic acid substitution at amino acid 148 (S148E).

Development

Selected References

Genetics

- *A<sup>MOLF</sup>*
- *Hc<sup>0</sup>*
- *Ahr<sup>b-3</sup>*
- *Pde6b<sup>rd1</sup>*
- *Cox7a2<sup>l</sup>*

Disease/Phenotype
Genotyping Protocols
Genotyping resources and troubleshooting
Dietary Information
LabDiet® 5K52 formulation (6% fat)
Breeding Considerations

These mice are small and often need to wait until 4 weeks of age to wean.

Additional Breeding and Husbandry Support
Mating System
Sibling x Sibling
Appearance
white-bellied agouti
Related Genotype: A<sup>w</sup>/A<sup>w</sup>

Citation
When using the MOLF/EiJ mouse strain in a publication, please include JAX stock #000550 in your Materials and Methods section.

Animal Health Reports
Facility Barrier Level Descriptions

- AX11 (Maximum)

Pricing & Availability

Live mice available in varying quantities. Ask Customer Service for details.
Pricing effective for USA, Canada and Mexico shipping destinations

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TERMS OF USE

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Phone: 207-288-6470
Email: TechTran@jax.org

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## Related Strains

### All

- By Allele
- By Gene
- By Collection

All Related Strains