

B6.129S4(FVB)-*Macroh2a2*^{tm1.1Peh}/Mmjax

MMRRC Stock No: **37474-JAX** | macroH2A2 KO

 Congenic, Targeted Mutation

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These *H2afy2* or macroH2A2 knockout mice exhibit may be useful for studying the involvement of H2A histones in the regulation of gene expression.

Donating Investigator

John Pehrson, University of Pennsylvania

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GENETIC OVERVIEW

Genetic Background

Generation

Macroh2a2^{tm1.1Peh}

Alele Type

Gene Symbol

Gene Name

Targeted (Null/Knockout)

Macroh2a2

macroH2A.2 histone

VIEW GENETICS

RESEARCH APPLICATIONS

Cell Biology Research

Metabolism Research

VIEW ALL RESEARCH APPLICATIONS

Details

Detailed Description

H2afy2 or macroH2A2 (H2A histone family, member Y2) encodes an alternative H2A histone that includes a unique C-terminal non-histone domain. The macroH2A histones function in a subset of nucleosomes where they are involved in the regulation of gene expression. Homozygous mice are viable, fertile and exhibit no obvious phenotype. When combined with mice carrying *H2afy2*^{tm1Peh}, double mutant mice on the C57BL/6 background breed poorly by either failing to reproduce or exhibiting high rates (29%) of perinatal lethality. On the 129S6 background, double KO mice exhibit abnormally large eyelids (macroblepharon), some eyelid inflammation, and darkened fur on the back (by 6 weeks of age).

This strain may be useful for studying the involvement of H2A histones in the regulation of gene expression.

Development

Control Suggestions

Selected References

Genetics

Macroh2a2^{tm1.1Peh}

Disease/Phenotype

Disease Terms

Research Areas By Phenotype

Mammalian Phenotype Terms by Genotype

References

Technical Support

Genotyping Protocols

Standard PCR:[H2afy2KO-Alternate 1](#)

[Genotyping resources and troubleshooting](#)

Breeding Considerations

While maintaining a live colony, these mice are bred as homozygotes.

[Additional Breeding and Husbandry Support](#)

Citation

When using the macroH2A2 KO mouse strain in a publication, please [cite the originating article\(s\)](#) and include MMRRC stock #37474 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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