FVB.129(B6)-Usp18^im1Dez/J

Stock No: 007225

- Congenic, Targeted Mutation

PLACE ORDER

Typically mice are recovered in 10-14 weeks. Contact Customer Service to place an order or for more information.

These Usp18 (or Ubp43)-mutant mice may be useful in studying interferons and their receptors, cellular function, signal transduction, and the Janus kinase-signal transducer and activator of transcription (JAK-STAT) pathway.

Donating Investigator

Dong-Er Zhang, University of California, San Diego

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GENETIC OVERVIEW

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
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**Usp18^im1Dez**

<table>
<thead>
<tr>
<th>Allele Type</th>
<th>Gene Symbol</th>
<th>Gene Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Targeted (Reporter, Null/Knockout)</td>
<td>Usp18</td>
<td>ubiquitin specific peptidase 18</td>
</tr>
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</table>

VIEW GENETICS

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RESEARCH APPLICATIONS

- Virology Research
- Research Tools
- Developmental Biology Research
- Hematological Research
- Immunology, Inflammation and Autoimmunity Research
- Neurobiology Research
- Cell Biology Research
- Cancer Research

VIEW ALL RESEARCH APPLICATIONS
Details

Detailed Description

Homozygous Usp18 (or Ubp43) mutant mice on the FVB/N genetic background are viable and fertile, exhibiting none of the severe neurologic disorders that lead to embryonic lethality or early death reported for Ubp43-deficient mice on a C57BL/6 or mixed B6;129 genetic background. In contrast to wildtype mice, thymi from homozygous mice injected with LPS exhibit no protein from the targeted gene. Expression of the lacZ cassette is observed in both heterozygous and homozygous brain tissues. Homozygous mice are hypersensitive to type I interferon (IFN) and undergo apoptosis upon IFN stimulation. Ubp43-deficiency results in enhanced and prolonged STAT1 phosphorylation, DNA binding, and increased induction of hundreds of interferon stimulated genes (ISGs).

Homozygous mice exhibit greater resistance to the cytopathic effects caused by a number of viruses including lymphocytic choriomeningitis virus (LCMV), vesicular stomatitis virus (VSV), and Sindbis virus (SNV). Ubp43-deficient cells exhibit high levels of ISG15 modified proteins. These Usp18 (or Ubp43)-mutant mice may be useful in studying interferons and their receptors, cellular function, signal transduction, and the Janus kinase–signal transducer and activator of transcription (JAK–STAT) pathway.

In an attempt to offer alleles on well-characterized or multiple genetic backgrounds, alleles are frequently moved to a genetic background different from that on which an allele was first characterized. It should be noted that the phenotype could vary from that originally described. We will modify the strain description if necessary as published results become available.

Development

Expression Data

Control Suggestions

Selected References

Genetics

Usp18<sup>ln102z</sup>

Disease/Phenotype

Disease Terms

Research Areas By Genotype

Mammalian Phenotype Terms by Genotype

References
Genotyping Protocols
Separated PCR: Usp18^{m1Dzh}
Genotyping resources and troubleshooting

Breeding Considerations
When maintaining a live colony, homozygous mice may be bred. The donating investigator reports that homozygous mice on the FVB/N genetic background exhibit none of the severe neurologic disorders that lead to the perinatal lethality observed in homozygotes on a C57BL/6 or mixed B6.129 genetic background.
Additional Breeding and Husbandry Support

Citation
When using the FVB:129S7;Usp18^{m1Dzh}/J mouse strain in a publication, please cite the originating article(s) and include JAX stock #007225 in your Materials and Methods section.
Facility Barrier Level Descriptions
Production of mice from cryopreserved embryos or sperm occurs in a maximum barrier room, G200

Pricing & Availability

Typically mice are recovered in 10-14 weeks. Contact Customer Service to place an order or for more information.

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<th>SERVICE</th>
<th>GENOTYPE</th>
<th>PRICE</th>
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<tbody>
<tr>
<td>Cryo Recovery</td>
<td>Heterozygous for Usp18^{m1Dzh}</td>
<td>$2,595.00</td>
</tr>
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</table>

We will fulfill your order by providing at least two carriers for each strain ordered. The total number, sex, and genotypes provided will vary, although typically 8 or more animals are provided. Please check genotypes which will be recovered. While the genotypes of all animals produced will be communicated to you prior to scheduling shipment, the genotypes of animals provided may not reflect the mating scheme and genotypes described in the strain description. Animals are typically ready to ship in 11-14 weeks. If a second recovery is required to produce the minimum number of animals, then delivery time would increase to approximately 25 weeks. If we fail to produce animals of the correct genotype, you will not be charged. We cannot guarantee the reproductive success of mice shipped to your facility. If the mice are lost after the first three days (post-arrival) or do not produce progeny at your facility, a new order and fee will be necessary.

Cryorecovery to establish a Dedicated Supply for greater quantities of mice. Mice recovered can be used to establish a dedicated colony to contractually supply you mice according to your requirements. Price by quotation.
Related Products and Services

Frozen Mouse Embryo $2,595.00 per straw or vial

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Related Strains

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<td>By Collection</td>
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All Related Strains
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Shipments have begun at our new facility, allowing increased access to JAX mouse models.

Leading the search for
TOMORROW'S CURES

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