B6.129P2-Cd38<sup>tm1Lnd</sup>/J

Stock No: 003727 | CD38-

- Congenic, Targeted Mutation

**CRYO RECOVERY**

**PLACE ORDER**

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

**Also Known As: CD38-**

These Cd38 knock-out mice exhibit impairments in glucose-induced increases in ADP-ribosyl cyclase/cyclic ADP-ribose (cADPR), intracellular calcium concentration, and insulin secretion. They are unable to mount an innate immune response to bacterial pathogens.

**Donating Investigator**

Frances E. Lund, The Trudeau Institute

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<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
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<tbody>
<tr>
<td>Cd38&lt;sup&gt;tm1Lnd&lt;/sup&gt;</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>Cd38</td>
<td>CD38 antigen</td>
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**VIEW GENETICS**

**Immunology, Inflammation and Autoimmunity Research**  
**Cancer Research**  
**Diabetes and Obesity Research**

**VIEW ALL RESEARCH APPLICATIONS**
Starting at:
$2,595.00 Domestic price

Cryo Recovery

VIEW PRICE LIST

Details

Detailed Description
Mice homozygous for Cd38tm1Led are viable, fertile and appear to be free from gross defects. Cd38 transcripts and protein product are not detected in these animals, nor are B lymphocytes responsive to the proliferative effects of anti-CD38 antibodies. NAD+ glycohydrolase activity in spleen, liver and brain is either markedly reduced or absent and a decrease in hapten-specific IgM, IgG1 and IgE responses is observed. Kato et al. recently published a targeted disruption in exon 1 of the Cd38 gene (J Biol Chem 274:1869-1872, 1999). Homozygous mutant mice show impairments in glucose-induced increases in ADP-ribosyl cyclase/cyclic ADP-ribose (cADPR), intracellular calcium concentration, and insulin secretion. These results support an essential role for CD38 in intracellular calcium mobilization by cADPR for insulin secretion. CD38 deficient mice are unable to mount an innate immune response to bacterial pathogens such as Streptococcus pneumoniae. In addition, CD38 dependent cADPR production is required for neutrophil chemotaxis and calcium signaling in response to the bacterially derived peptide fMLP.

Development

Control Suggestions

Selected References

Genetics

Cd38tm1Led

Disease/Phenotype

Disease Terms

Research Areas By Genotype

Mammalian Phenotype Terms by Genotype

References

Technical Support
Genotyping Protocols
Standard PCR: Cd38<sup>tm1Lnd</sup>
Genotyping resources and troubleshooting

Breeding Considerations
This strain originated on a B6;129P2 background and has been backcrossed to C57BL/6J for twelve generations. Homozygous mice are more susceptible to pathogenic bacteria so conventional specific pathogen-free (SPF) conditions are recommended.
Additional Breeding and Husbandry Support

Citation
When using the Cd38<sup>tm1Lnd</sup> mouse strain in a publication, please cite the originating article(s) and include JAX stock #003727 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.

<table>
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<tr>
<th>SERVICE</th>
<th>GENOTYPE</th>
<th>PRICE</th>
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<tbody>
<tr>
<td>Cryo Recovery</td>
<td>Homozygous for Cd38&lt;sup&gt;tm1Lnd&lt;/sup&gt;, 1 pair minimum</td>
<td>$2,595.00</td>
</tr>
</tbody>
</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.

Payment Terms and Conditions
Terms are granted by individual review and stated on the customer invoice(s) and account statement. These transactions are payable in U.S. currency within the granted terms. Payment for services, products, shipping containers, and shipping costs that are rendered
are expected within the payment terms indicated on the invoice or stated by contract. Invoices and account balances in arrears of stated terms may result in The Jackson Laboratory pursuing collection activities including but not limited to outside agencies and court filings.

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The Jackson Laboratory has rigorous genetic quality control and mutant gene genotyping programs to ensure the genetic background of JAX® Mice strains as well as the genotypes of strains with identified molecular mutations. JAX® Mice strains are only made available to researchers after meeting our standards. However, the phenotype of each strain may not be fully characterized and/or captured in the strain data sheets. Therefore, we cannot guarantee a strain’s phenotype will meet all expectations. To ensure that JAX® Mice will meet the needs of individual research projects or when requesting a strain that is new to your research, we suggest ordering and performing tests on a small number of mice to determine suitability for your particular project.

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

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- By Allele
- By Gene
- By Collection

All Related Strains

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