B6.129S4-Cd28 tm1shr Ctl4a tm1shr/J

Stock No: 017607 | CTLA-4/CD28 double KO

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.
Overview

Also Known As: CTLA-4/CD28 double KO
These mice harbor both the Cd28 and the Ctl4a knock-out mutations on the same heterologous chromosome. These double mutant mice may be useful for studying T cell responses, activation, tolerance, development, co-stimulatory molecules, and allograft survival.

Donating Investigator
Arlene H Sharpe, Harvard Medical School

GENETIC OVERVIEW

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
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<tbody>
<tr>
<td>Ctl4a&lt;sup&gt;tm1Shr&lt;/sup&gt;</td>
<td></td>
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<tr>
<td>Allele Type</td>
<td>Gene Symbol</td>
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<tr>
<td>Targeted (Null/Knockout)</td>
<td>Ctl4a</td>
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<tr>
<td>Cd28&lt;sup&gt;tm1Shr&lt;/sup&gt;</td>
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<td>Cd28</td>
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</tbody>
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RESEARCH APPLICATIONS
Cancer Research
Immunology, Inflammation and Autoimmunity Research
Virology Research
Research Tools
Cell Biology Research
Internal/Organ Research
Hematological Research

BASE PRICE
Starting at:
$2,854.50 Domestic price Cryo Recovery

VIEW GENETICS

VIEW ALL RESEARCH APPLICATIONS

VIEW PRICE LIST
Details

Detailed Description

These mice harbor both the Cd28 and the Ctl4 knockout mutations on the same heterologous chromosome. Mice homozygous for both knockout mutations (CD28/CTLA-4−/−) are viable and fertile, with no lymphoproliferative phenotype. Flow cytometry shows CD28 and CTLA4 expression is abolished in homozygous mice (as determined by cell-surface CD28 staining of naive CD4⁺ T cells, and intracellular CTLA4 staining of activated CD4⁺ cells). CD28/CTLA-4−/− mice congenic on the C57BL/6 genetic background (C57BL6.CD28/CTLA-4−/−) exhibit decreased CD4⁺ T cells populations, decreased T cell proliferation, normal T cell / B cell development, and increased allotransplant survival (eventual heart graft rejection) when compared to wildtype mice. While mice singly homozygous for the CTLA-4 knockout mutation uniformly develop a lethal autoimmune lymphoproliferative disorder (death as early as 3 weeks of age) that is strictly dependent on CD28 costimulation, C57BL6.CD28/CTLA-4−/− mice exhibit no lymphoproliferative phenotype (no splenomegaly, lymphadenopathy, or lymphocytic infiltrates), and their T cells are not in a constitutively activated state.

Development

Control Suggestions

Selected References

Genetics

Ctl4−/−

Cd28−/−

Disease/Phenotype

Disease Terms

Research Areas By Genotype

Mammalian Phenotype Terms by Genotype

References

Technical Support

CHAT OFFLINE

CONTACT TECHNICAL SUPPORT
Genotyping Protocols
Separated PCR: Ctlα4<sup>tm1Shr</sup>
Standard PCR: Cd28<sup>tm1Shr</sup>
Genotyping resources and troubleshooting

Breeding Considerations
When maintaining a live colony, mice homozygous for both targeted mutations may be bred together.
Additional Breeding and Husbandry Support

Citation
When using the Ctlα4/Cd28 double KO mouse strain in a publication, please cite the originating article(s) and include JAX stock #017657 in your Materials and Methods section.

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>
<thead>
<tr>
<th>Domestic</th>
<th>International</th>
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Cryorecovery - Domestic Pricing

<table>
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<tr>
<th>SERVICE</th>
<th>GENOTYPE</th>
<th>PRICE</th>
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</thead>
<tbody>
<tr>
<td>Cryo Recovery</td>
<td>Heterozygous for Cd28&lt;sup&gt;tm1Shr&lt;/sup&gt;, Heterozygous for Ctlα4&lt;sup&gt;tm1Shr&lt;/sup&gt;</td>
<td>$2,854.50</td>
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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

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<thead>
<tr>
<th>Product</th>
<th>Description</th>
<th>Price</th>
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<tbody>
<tr>
<td>Frozen Mouse Embryo</td>
<td>B6.129S4-Cd28&lt;sup&gt;tm1Shr&lt;/sup&gt; Ctlα4&lt;sup&gt;tm1Shr&lt;/sup&gt;/J Frozen Embryo</td>
<td>$2595.00</td>
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All

By Allele

By Gene

By Collection

All Related Strains

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