BKS.Cg-Dock7^{m+/-} Lepr^{db} Tg(SLC2A4)HJdm/PfzrJ

Stock No: 031579 | hGLUT4

Spontaneous Mutation, Transgenic

AVAILABLE FOR Registering Interest

REGISTER INTEREST

Please contact Technical Support for more information

Also Known As: hGLUT4

The hGLUT4 transgenic construct contains the human GLUT4 gene and is useful when studying glucose homeostasis.

READ MORE +

GENETIC OVERVIEW

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
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<tbody>
<tr>
<td>Open Stock</td>
<td>?^+pN1 (2018-09-07 00:00:00)</td>
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**Dock7^{m}**

<table>
<thead>
<tr>
<th>Allele Type</th>
<th>Gene Symbol</th>
<th>Gene Name</th>
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<tbody>
<tr>
<td>Spontaneous</td>
<td>Dock7</td>
<td>dedicator of cytokinesis 7</td>
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**Lepr^{db}**

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<th>Allele Type</th>
<th>Gene Symbol</th>
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<tbody>
<tr>
<td>Spontaneous</td>
<td>Lepr</td>
<td>leptin receptor</td>
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**Tg(SLC2A4)HJdm**

<table>
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<tr>
<th>Allele Type</th>
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<tbody>
<tr>
<td>Transgenic (Inserted expressed sequence, Humanized sequence)</td>
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</table>

VIEW GENETICS

RESEARCH APPLICATIONS

Reproductive Biology Research
Mouse/Human Gene Homologs
Diabetes and Obesity Research
Endocrine Deficiency Research
Immunology, Inflammation and Autoimmunity Research
**Details**

**Detailed Description**

hGLUT4 mice contain the human solute carrier family 2 (facilitated glucose transporter), member 4 (SLC2A4) gene with an SV40 polyadenylation sequence. Also known as the Insulin-Responsive Glucose Transporter Type 4 (GLUT4), this transporter is rapidly translocated from intracellular storage sites to the muscle cell surface, allowing uptake of glucose. Mutations in the human SLC2A4 gene have been linked to noninsulin-dependent diabetes mellitus. hGLUT4 db/db mice exhibit elevated plasma membrane associated GLUT4 protein in the basal state, which increases further after an insulin/glucose injection. They also show a reduction of both fasted and fed plasma glucose levels (to 50 and 360 mg/dl, respectively) compared to non-transgenic littermates.

**Development**

**Expression Data**

**Control Suggestions**

**Selected References**

**Genetics**

**Dock7m**

**Leprdb**

**Tg(SLC2A4)HJdm**

**Disease/Phenotype**

**Disease Terms**

**Research Areas By Genotype**

**Mammalian Phenotype Terms by Genotype**

**References**

**Technical Support**
Genotyping Protocols
MELT: Tg(SLC2A4)H.Jdm
End Point Analysis: Dock7\textsuperscript{m}-Probe
End Point Analysis: Lepr\textsubscript{db}
Genotyping resources and troubleshooting

Breeding Considerations
When maintaining a live colony, hemizygous mice may be bred to wildtype mice from the colony or to BKS.Cg-Dock7\textsuperscript{m} +/+ Lepr\textsubscript{db}/J (BKS db) mice (Stock No. 000642).
Additional Breeding and Husbandry Support

Citation
When using the B6.129Tg mouse strain in a publication, please cite the originating article(s) and include JAX stock #031579 in your Materials and Methods section.
Facility Barrier Level Descriptions
AX9 (Standard)

STRAIN INTEREST REGISTRATION

Please fill out the form below to indicate your interest in purchasing this JAX\textsuperscript{TM}Mice strain. This information helps us manage the colony build and better meet the broad needs of the research community. Please send any technical questions to Technical Support.

Contact Information
First Name

Last Name

Institution

Phone Number

Email

Interest
Please indicate your approximate levels of interest. You can add another line by selecting "Add More Interest".
Number of Mice
Frequency
Product
Comment
Terms Of Use

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Email: TechTran@jax.org

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Related Strains

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<td>By Gene</td>
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All Related Strains