The Jackson Laboratory

NOD.B6-(*D1Mit18-D1Mit445*)(*D11Nds1-D11Mit41*)/DelJ

Stock No: **005311** | NOD.Idd4A

Congenic

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

PLACE ORDER

Email Download PDF Help

Donating Investigator

Terry Delovitch, John P, Robarts Research Institute

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GENETIC OVERVIEW

Genetic Background	Generation

Idd4$^{C57BL/6}$

Allele Type	Gene Symbol	Gene Name
QTL	*Idd4*	insulin dependent diabetes susceptibility 4

Marker(s)

Marker Symbol	Marker Name
D1Mit445	DNA Segment, Chr 1, Massachusetts Institute of Technology 445
D11Nds1	DNA segment, Chr 11, Nuffield Department of Surgery 1
D1Mit18	DNA segment, Chr 1, Massachusetts Institute of Technology 18
D11Mit41	DNA segment, Chr 11, Massachusetts Institute of Technology 41

VIEW GENETICS

RESEARCH APPLICATIONS

Diabetes and Obesity Research
Immunology, Inflammation and Autoimmunity Research

VIEW ALL RESEARCH APPLICATION

BASE PRICE

Starting at:

$2,854.50 Domestic price Cryo Recovery

VIEW PRICE LIST

Details

Important Note

Genetic Quality Control of this Chromosome 11, *Idd4* congenic stock indicates Chromosome 1 markers in the *Idd5* region are of C57BL/6 origin.

Detailed Description

The donating investigator reports diabetes onset of female NOD.B6-(*D1Mit18-D1Mit445*) (*D11Nds1-D11Mit41*)/DelJ (commonly called NOD.B6-*Idd4A*, Chromosome 11, 43.8-49cM) is delayed, with 15% of the females and 5% of the males becoming diabetic by 30 weeks of age. In the same colony, diabetes rates in NOD controls are 75% in females and 45% in males by 30 weeks of age. Histological examination of 12-week-old NOD.B6-*Idd4A* mice indicates 70% of the islets are normal compared with 50% in NOD controls. At 25-30 weeks of age, 10% of NOD.B6-*Idd4A* islets are infiltrated compared to 80% in NOD controls. Until 25-30 weeks of age, NOD.B6-*Idd4A* mice only develop periductal infiltrates with mild non-destructive insulitis. Additionally, immunohistochemical assays indicate normal amounts of stored insulin. Purified splenic T-cells from 12-week-old, non-diabetic NOD.B6-*Idd4A* females alone are able to induce diabetes in NOD.*Prkdc*^{scid} female recipients. Diabetes onset is slightly delayed in recipients of NOD.B6-*Idd4A* T-cells only, with 50% becoming diabetic by 70 days post transfer compared to 80% diabetic in recipients receiving either diabetic NOD T-cells alone or recipients co-transferred with diabetic NOD/ non-diabetic NOD.B6-*Idd4A* T-cells.TCR stimulated T-cell proliferative responses or anti-CD3 stimulated splenic T-cells express CD69, CD25, and produce IL2 at similar levels to NOD controls, while producing more IL4 and less interferon gamma than NOD controls (Grattan *et al*. 2002). 005311 incidence study and fine mapping data.

Surprisingly, Genetic Quality Control completed at the Jackson Laboratory indicates Chromosome 1 markers in the *Idd5* region are of C57BL/6 origin and QC of Idd4 congenic stocks.

The reported conclusion of diabetes resistance has been re-evaluated since the C57BL/6 contaminating genome on Chromosome 1 has been eliminated in Stock No. 006809. Diabetes incidence studies performed at The Jackson Laboratory show an accelerated onset and incidence of diabetes in Stock No. 006809 females when compared with NOD/ShiLtJ controls and the original Stock No. 005311, while the diabetes onset and incidence in males is accelerated compared to the original Stock No. 005311 and is slightly less compared to NOD/ShiLtJ controls. 006809 incidence study and fine mapping data.

This strain may be useful for identifying genes involved with diabetes resistance located within the *Idd4*

region of Chromosome 11.

- Development
- Control Suggestions
- Selected References

Genetics

- *Idd4*$^{C57BL/6}$
- *D1Mit445*
- *D11Nds1*
- *D1Mit18*
- *D11Mit41*

Disease/Phenotype

- Disease Terms
- Research Areas By Phenotype
- Mammalian Phenotype Terms by Genotype
- References

Technical Support

CONTACT TECHNICAL SUPPORT

Genotyping Protocols
Genotyping resources and troubleshooting

Appearance
albino, pink-eyed
Related Genotype: *A*/? *Tyr*^{c}/*Tyr*^{c}

Citation
When using the NOD.Idd4A mouse strain in a publication, please cite the originating article(s) and include JAX stock #005311 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

Pricing & Availability

Cryo Recovery

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

DomestiInternatio

Pricing effective for USA, Canada and Mexico shipping destinations

CRYORECOVERY - DOMESTIC PRICING

SERVICE/PRODUCT	DESCRIPTION	PRICE
Cryo Recovery	Homozygous, 1 pair minimum	$2,854.50

RELATED PRODUCTS AND SERVICES

Frozen Mouse Embryo	NOD.B6-(D1Mit18-D1Mit445)(D11Nds1-D11Mit41)/DelJ Frozen Embr	$2595.00

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.

THE JACKSON LABORATORY'S GENOTYPE PROMISE

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. We do not guarantee breeding performance and therefore suggest that investigators order more than one breeding pair to avoid delays in their research.

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General Terms and Conditions

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LICENSING INFORMATION

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Email: TechTran@jax.org

Related Strains

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By Allele

By Gene

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