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Stock No: 030442 | mdx ^{4Cv}/NRG

Chemically Induced Mutation, 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: mdx^{4Cv}/NRG

These mdx^{4Cv}/NRG mutant mice are an immune-deficient irradiation resistant model of Duchenne muscular dystrophy (DMD) for transplantation experiments with human cells, such as human induced pluripotent stem cells (hiPSC).

Donating Investigator

Michele Calos, Stanford University School of Medicine

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GENETIC OVERVIEW

Genetic Background

Generation

Rag1^{tm1Mom}

Allele Type

Gene Symbol

Gene Name

Targeted (Null/Knockout)

Rag1

recombination activating gene 1

Il2rg^{tm1Wjl}

Allele Type

Gene Symbol

Gene Name

Targeted (Null/Knockout)

Il2rg

interleukin 2 receptor, gamma chain

Dmd^{mdx-4Cv}

Allele Type

Gene Symbol

Gene Name

Chemically induced (ENU)

Dmd

dystrophin, muscular dystrophy

VIEW GENETICS

RESEARCH APPLICATIONS

Cancer Research
Hematological Research
Immunology, Inflammation and Autoimmunity Research
Research Tools
Internal/Organ Research
Neurobiology Research
Mouse/Human Gene Homologs

VIEW ALL RESEARCH APPLICATIONS

BASE PRICE

Starting at:

\$2,854.50 Domestic price Cryo Recovery

VIEW PRICE LIST

Details

Detailed Description

These mdx^{4Cv}/NRG mice are homozygous for the *Rag1*^{null} mutation, and homozygous (for females; or hemizygous for males) for the X-linked *Dmd*^{mdx-4Cv} and *IL2rγ*^{null} mutations. The NRG platform allows transplantation studies related to progressive muscular dystrophy due to defects in the X linked muscular dystrophy 4 gene.

No dystrophin protein was detected in gastrocnemius muscle from 6 month old mice by western blot and immunohistochemical analysis. At 6 months of age, mdx^{4Cv}/NRG mice exhibit impaired mobility, defective membrane integrity in muscle fibers, as assayed by Evans blue dye staining, and increased collagen deposition in gastrocnemius and hamstring muscles, compared to NRG mice. Histological examination of muscle from mutant mice reveals centronucleated fibers, mononuclear cell infiltration and increased variability in fiber size.

Females homozygous for all 3 mutations (and males homozygous for *Rag1*^{null}; hemizygous for the X-linked *Dmd*^{mdx-4Cv} and *IL2rγ*^{null} mutations) are viable and fertile.

Development

Control Suggestions

Selected References

Genetics

[+ *Rag1*^{tm1Mom}](#)

[+ *Il2rg*^{tm1Wjl}](#)

[+ *Dmd*^{mdx-4Cv}](#)

– Disease/Phenotype

+ Disease Terms

+ Research Areas By Genotype

+ Mammalian Phenotype Terms by Genotype

+ References

– Technical Support

C H A T O  F L I N E

C O N T A C T T E C H N I C A L S U P P O R T

Genotyping Protocols

Probe: $IL2rg^{tm1Wjl}$ -PROBE

End Point Analysis: $Dmd^{mdx-4Cv}$ EP

Standard PCR: $Rag1^{tm1Mom}$

[Genotyping resources and troubleshooting](#)

Breeding Considerations

When maintaining a live colony, females homozygous for the $Rag1^{null}$, $Dmd^{mdx-4Cv}$ and $IL2rg^{null}$ mutations may be bred with males homozygous for the $Rag1^{null}$ mutation and hemizygous for the X-linked $Dmd^{mdx-4Cv}$ and $IL2rg^{null}$ mutations.

[Additional Breeding and Husbandry Support](#)

Citation

When using the mdx^{4Cv} NRC mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #030442 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



Cryo Recovery

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

Domestic | International

Pricing effective for USA, Canada and Mexico shipping destinations

Domestic Pricing for

- Commercial & For-Profit
- Not-For-Profit & Academic

Cryorecovery - Domestic Pricing

SERVICE	GENOTYPE	PRICE
Cryo Recovery	Females will be homozygous for Rag1<tm1Mom> , Heterozygous for Dmd<mdx-4Cv> and homozygous for Il2rg<tm1Wjl> Males will be homozygous for Rag1<tm1Mom> , wildtype for Dmd<mdx-4Cv> and hemizygous for Il2rg<tm1Wjl>	\$2,854.50

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	NOD.Cg-Rag1<tm1Mom> Dmd<mdx-4Cv> Il2rg<tm1Wjl>/McalJ	\$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.

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Licensing Information

Phone: 207-288-6470

Email: TechTran@jax.org

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