STOCK *Atp13a2* $^{tm1.1Wtd}$ /J

Stock No: **028387** | Atp13a2 floxed

Targeted Mutation

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

PLACE ORDER

endolysosomal dysfunction, α-synuclein accumulation, and neurodegeneration associated with the onset of Parkinson's disease.

Donating Investigator

William Dauer, University of Michigan Medical School

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GENETIC OVERVIEW

Genetic Background	Generation

Atp13a2$^{tm1.1Wtd}$

Allele Type	Gene Symbol	Gene Name
Targeted (Conditional ready (e.g. floxed), No functional change)	*Atp13a2*	ATPase type 13A2

VIEW GENETICS

RESEARCH APPLICATIONS

Neurobiology Research
Research Tools

VIEW ALL RESEARCH APPLICATIO

BASE PRICE

Starting at:

$2,854.50 Domestic price Cryo Recovery

VIEW PRICE LIST

Details

Detailed Description

Atp13a2 floxed mice have exons 2-3 of the ATPase type 13A2 (*Atp13a2*) gene flanked by *loxP* site, ATP13A2 encodes a transmembrane lysosomal ATPase that is involved in intracellular cation homeostasis. Mutations in *Atp13a2* have been associated with the onset of Kufor–Rakeb syndrome (KRS), characterized by early-onset Parkinsonism with diffuse cerebral and cerebellar atrophy and neurodegeneration. Homozygotes are viable and fertile. When crossed with a strain expressing Cre Recombinase, resulting offspring will contain a premature stop codon, abolishing gene expression.

Atp13a2 null mice exhibit age-related neuropathological changes, including reactive astrocytosis, lipofuscinosis, protein aggregation, and lysosomal accumulation in multiple brain regions, including the cortex, cerebellum, hippocampus, and striatum by 1 month of age. This was followed by onset of lipofuscinosis and autofluorescence by 3 months of age, and the accumulation of lysosomal proteins LAMP1, LAMP2, and lysosomal lipid BMP by 6 months. The aggregation of ubiquitinated proteins and p62 is evident by 12 months. No α-synuclein related abnormalities are observed in mice up to 18 months of age. Modulating α-synuclein levels by intercrossing these mice with α-synuclein null mice or α-synuclein overexpressing mice (B6;C3-Tg(Prnp-SNCA*A53T)83Vle/J Stock No. 004479) did not change the onset or extent of pathological change.

Development

Control Suggestions

Selected References

Genetics

Atp13a2$^{tm1.1Wtd}$

Disease/Phenotype

Disease Terms

Research Areas By Phenotype

Mammalian Phenotype Terms by Genotype

References

Technical Support

CONTACT TECHNICAL SUPPORT

Genotyping Protocols

Standard PCR:Atp13a2
Genotyping resources and troubleshooting

Breeding Considerations

When maintaining a live colony, homozygous mice may be bred together.

Additional Breeding and Husbandry Support

Citation

When using the Atp13a2 floxed mouse strain in a publication, please cite the originating article(s) and include JAX stock #028387 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

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

Recovery

Domestic | International

Pricing effective for USA, Canada and Mexico shipping destinations

CRYORECOVERY - DOMESTIC PRICING

SERVICE/PRODUCT	DESCRIPTION	PRICE
Cryo Recovery	Heterozygous or wildtype for Atp13a2<tm1.1Wtd>	$2,854.50

RELATED PRODUCTS AND SERVICES

Frozen Mouse Embryo	STOCK Atp13a2<tm1.1Wtd>/J Frozen Embryo	$2595.00

PAYMENT TERMS AND CONDITIONS

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

Terms Of Use

TERMS OF USE

General Terms and Conditions

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Use of MICE by companies or for-profit entities requires a no-fee JAX Leap License prior to shipping.

LICENSING INFORMATION

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Email: TechTran@jax.org

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