

B6.129S7-Cacna1a^{tm3Hzo} /J

Stock No: **008683**

 Congenic, Targeted Mutation

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

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Donating Investigator

Huda Zoghbi, Baylor College of Medicine

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GENETIC OVERVIEW

Genetic Background

Generation

Cacna1a^{tm3Hzo}

Alele Type

Targeted (Humanized
sequence)

Gene Symbol

Cacna1a

Gene Name

calcium channel, voltage-dependent, P/Q type, alpha 1A
subunit

VIEW GENETICS

RESEARCH APPLICATIONS

Neurobiology Research

VIEW ALL RESEARCH APPLICATIONS

BASE PRICE

Starting at:

\$2,854.50 Domestic price Cryo Recovery

V I E W P R I C E L I S T

Details

Detailed Description

These knock-in mice carry a hyperexpanded (84-copy) polyglutamine (CAG) repeat in the targeted *Cacna1a* (calcium channel, voltage-dependent, P/Q type, alpha 1A subunit) gene. At 17 months of age, homozygous $Sca6^{84Q/84Q}$ mice of 129/SvEv background start to exhibit hypoactivity and less kept fur compared with wild-type mice. As they age further, they exhibit these features even more clearly. Heterozygous $Sca6^{84Q/+}$ mice are indistinguishable from wild-type littermates, even after 20 months of age. On the rotarod, 19-month-old $Sca6^{84Q/+}$ (C57BL/6J-129/SvEv mixed background) mice are significantly worse than wild-type mice, consistent with the expectation that the $Sca6^{84Q}$ allele will act in a dominant fashion to induce age-dependent motor impairment. $Sca6^{84Q/84Q}$ (129/SvEv background) mice perform worse than wild-type mice by seven months of age. The $Sca6^{84Q}$ mutation does not alter voltage sensitivity of activation or inactivation in the acutely dissociated Purkinje cells. $Sca6^{84Q/84Q}$ Purkinje cells show reduced voltage-gated calcium (CaV) 2.1 channel immunoreactivity and a corresponding reduction of whole-cell current density compared with wild-type Purkinje cells. This line is congenic on a C57BL/6 genetic background. This strain may be useful in studies of age-dependent motor impairment.

Development

Control Suggestions

Selected References

Genetics

$Cacna1a^{tm3Hzo}$

Disease/Phenotype

Disease Terms

Research Areas By Phenotype

Mammalian Phenotype Terms by Genotype

Technical Support

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

Standard PCR: [Cacna1a repeat assay](#)

Standard PCR: [Generic Neo](#)

Probe: [Generic Neo](#)

[Genotyping resources and troubleshooting](#)

Breeding Considerations

When maintained as a live colony, heterozygotes may be bred.

[Additional Breeding and Husbandry Support](#)

Citation

When using the B6.129S7-*Cacna1a*^{tm3Hzo}/J mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #008683 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.

Domestic International

Pricing effective for USA, Canada and Mexico shipping destinations

CRYORECOVERY - DOMESTIC PRICING

SERVICE/PRODUCT	DESCRIPTION	PRICE
Cryo Recovery	Heterozygous or Wild-type for <i>Cacna1a</i> <tm3Hzo>	\$2,854.50

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