

## B6;C3-Tg(Prnp-SNCA\*A53T)83Vle/J

Stock No: **004479** | A53T  $\alpha$ -synuclein transgenic line M83

 Transgenic

Sized to accommodate orders of up to 10 or more with age range. Ask Customer Service for details.

PLACE ORDER

[Email](#) [Download PDF](#) [Help](#)



### Also Known As:A53T $\alpha$ -synuclein transgenic line M83

M83 transgenic mice express the mutant human A53T alpha-synuclein under the direction of the mouse prion protein promoter. These mice may be useful in studying human neuronal alpha-synucleinopathies, such as familial Parkinson's Disease.

#### Donating Investigator

Virginia M Lee, University of Pennsylvania

READ MORE +

## GENETIC OVERVIEW

### Genetic Background

### Generation

N?<sup>+</sup>N8F5  
(2021-01-12 00:00:00)

### Tg(Prnp-SNCA\*A53T)83Vle

#### Alele Type

Transgenic (Inserted expressed sequence, Humanized sequence)

V I E W   G E N E T I C S

## RESEARCH APPLICATIONS

Neurobiology Research  
Sensorineural Research

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

## BASE PRICE

Starting at:

\$270.00 Domestic price for female 4-week

540.00 Domestic price for breeder pair

V I E W   P R I C E   L I S T

### Details

#### Detailed Description

These M83 transgenic mice express human A53T variant alpha-synuclein (full-length, 140 amino acid isoform) under the direction of the mouse prion protein promoter.

Mice homozygous for the transgenic insert are viable, fertile and normal in size. At eight months of age, some homozygous mice develop a progressively severe motor phenotype. Presentation of the phenotype may manifest at 14-15 months of age (on average). Lax grooming, weight loss and diminished mobility precede movement impairment, partial limb paralysis, trembling and inability to stand. Immunohistochemistry analysis of mutants between eight to 12 months of age reveals widely distributed alpha-synuclein inclusions, with dense accumulation in the spinal cord, brainstem, cerebellum and thalamus. The appearance of alpha-synuclein aggregate inclusions parallels the onset of the motor impairment phenotype. Axons and myelin sheaths exhibit progressive ultrastructural degeneration. Immunoelectron microscopy and biochemical analysis show the inclusions in neurons are comprised primarily of 10-16 nm fibrils of alpha-synuclein. The structure, location and onset of the inclusions seen in the mutant mice resemble characteristics seen in human neuronal alpha-synucleinopathies, such as familial Parkinson's Disease. In addition, mice exhibit impaired odor discrimination and detection beginning at 6 months of age. Homozygous mice have a high incidence of nonproductive matings. Aggression is observed, particularly in males, and may be due at least in part to the B6;C3H genetic background.

Mice hemizygous for the transgenic insert develop similar phenotypic traits, but onset occurs later, between 22 and 28 months of age. When hemizygotes are bred together, there may be some incidence of nonproductive matings (~20%). Aggression is observed, particularly in males, and may be due at least in part to the B6;C3H genetic background.

[+ Development](#)

---

[+ Expression Data](#)

---

[+ Control Suggestions](#)

---

[+ Selected References](#)

---

## [- Genetics](#)

---

[+ Tg\(Prnp-SNCA\\*A53T\)83Vle](#)

---

## [- Disease/Phenotype](#)

---

[+ Disease Terms](#)

---

[+ Research Areas By Phenotype](#)

---

[+ Mammalian Phenotype Terms by Genotype](#)

---

[+ References](#)

---

## [- 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

QPCR:[Tg\(SNCAcDNA\)-qPCR](#)

[Genotyping resources and troubleshooting](#)

Dietary Information

LabDiet® 5K52 formulation (6% fat)

## Breeding Considerations

When maintaining a live colony at The Jackson Laboratory, homozygous mice may be bred to hemizygous mice. Every ~10 generations, we breed transgenic mice to B6C3F1/J (Stock No. [100010](#)). As of October 2018, we have performed a total of eight crosses to B6C3F1/J.

Because aggression is frequently observed for mice on a B6;C3H genetic background, particularly in males, homozygous females bred to hemizygous males may be preferred to the reciprocal. Coat colors expected from breeding are agouti or black.

Homozygous mice have a high incidence of nonproductive matings. Aggression is observed, particularly in males, and may be due at least in part to the B6;C3H genetic background.

Mice hemizygous for the transgenic insert develop similar phenotypic traits, but onset occurs later, between 22 and 28 months of age. When hemizygotes are bred together, there may be some incidence of nonproductive matings (~20%). Aggression is observed, particularly in males, and may be due at least in part to the B6;C3H genetic background.

### Additional Breeding and Husbandry Support

#### Mating System

Homozygote x Hemizygote

Hemizygote x Hemizygote

For optimum breeding performance

#### Citation

When using the A53T  $\alpha$ -synuclein transgenic line M83 mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #004479 in your Materials and Methods section.

### Animal Health Reports

[Facility Barrier Level Descriptions](#)

 [AX11 \(Maximum\)](#)

## 🔵 Pricing & Availability



Available Now

Sized to accommodate orders of up to 10 or more with age range. Ask Customer Service for details.

## Domestic | International

Pricing effective for USA, Canada and Mexico shipping destinations

LIVE MOUSE			
AGE	SEX	GENOTYPE	PRICE
4 weeks	Female	Hemizygous for Tg(Prnp-SNCA*A53T)83Vle	\$270.00
	Male	Hemizygous for Tg(Prnp-SNCA*A53T)83Vle	\$270.00
4 weeks	Female	Homozygous for Tg(Prnp-SNCA*A53T)83Vle	\$270.00
	Male	Homozygous for Tg(Prnp-SNCA*A53T)83Vle	\$270.00
5 weeks	Female	Hemizygous for Tg(Prnp-SNCA*A53T)83Vle	\$270.00
	Male	Hemizygous for Tg(Prnp-SNCA*A53T)83Vle	\$270.00

5 weeks	Female	Homozygous for Tg(Prnp-SNCA*A53T)83Vle	\$270.00
	Male	Homozygous for Tg(Prnp-SNCA*A53T)83Vle	\$270.00
6 weeks	Female	Hemizygous for Tg(Prnp-SNCA*A53T)83Vle	\$270.00
	Male	Hemizygous for Tg(Prnp-SNCA*A53T)83Vle	\$270.00
6 weeks	Female	Homozygous for Tg(Prnp-SNCA*A53T)83Vle	\$270.00
	Male	Homozygous for Tg(Prnp-SNCA*A53T)83Vle	\$270.00
7 weeks	Female	Hemizygous for Tg(Prnp-SNCA*A53T)83Vle	\$270.00
	Male	Hemizygous for Tg(Prnp-SNCA*A53T)83Vle	\$270.00
7 weeks	Female	Homozygous for Tg(Prnp-SNCA*A53T)83Vle	\$270.00
	Male	Homozygous for Tg(Prnp-SNCA*A53T)83Vle	\$270.00
8 weeks	Female	Hemizygous for Tg(Prnp-SNCA*A53T)83Vle	\$270.00
	Male	Hemizygous for Tg(Prnp-SNCA*A53T)83Vle	\$270.00
8 weeks	Female	Homozygous for Tg(Prnp-SNCA*A53T)83Vle	\$270.00
	Male	Homozygous for Tg(Prnp-SNCA*A53T)83Vle	\$270.00

BREEDER PAIR			
SEX	GENOTYPE		PRICE
Female	Hemizygous for Tg(Prnp-SNCA*A53T)83Vle		\$540.00
Male	Hemizygous for Tg(Prnp-SNCA*A53T)83Vle		
Female	Homozygous for Tg(Prnp-SNCA*A53T)83Vle		\$540.00
Male	Hemizygous for Tg(Prnp-SNCA*A53T)83Vle		

RELATED PRODUCTS AND SERVICES		
Frozen Mouse Embryo	B6;C3-Tg(Prnp-SNCA*A53T)83Vle/J Frozen Embryos	\$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.

---

## ☐ Terms Of Use

### TERMS OF USE

[General Terms and Conditions](#)

Q U E S T I O N S   A B O U T   T E R M S   O F   U S E

### ADDITIONAL USE RESTRICTIONS APPLY

[Use of MICE by companies or for-profit entities requires a license prior to shipping.](#)

### LICENSING INFORMATION

Phone: 207-288-6470

Email: [TechTran@jax.org](mailto:TechTran@jax.org)

---

## ☐ Related Strains

All

By Allele

By Gene

By Collection





## DO YOU NEED BALB/c MICE?

Rely on JAX to provide the models you need, when you need them.

[LEARN MORE](#)



CONTACT



DONATE



SUBSCRIBE

[JAX HOME](#) [CAREERS](#) [LEGAL INFORMATION](#)

[RESEARCH CENTERS](#) [MOUSE GENOME INFORMATICS](#)

[MOUSE PHENOME DATABASE](#)

*Leading the search for*

# TOMORROW'S CURES



©2021 THE JACKSON LABORATORY

Choose other country or region



↑ E E E D B

Did you find what you were looking for?

Yes  No