C57BL/6-Tg(Neurod2-Smo*A1)199Jols/J

Stock No: 008831 | ND2:SmoA1

- Coisogenic, Targeted Mutation, Transgenic

**Available**

**PLACE ORDER**

Live mice available in varying quantities. Ask Customer Service for details.

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**Overview**

**Also Known As: ND2:SmoA1**

These transgenic mice express the constitutively active point mutation, SmoA1, of the mouse smoothened homolog (Drosophila) (Smo) gene, under the control of the mouse neurogenic differentiation 2 (Neurod2) promoter, with transgene expression specific to
cerebellar granule cells. Homozygous mice show an increased medulloblastoma incidence. This transgenic mouse strain may be useful in studies of medulloblastoma and metastasis.

Donating Investigator

James M Olson, Fred Hutchinson Cancer Research Center

### GENETIC OVERVIEW

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
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**Tg(Neurod2-Smo*A1)199Jols**

**Allele Type**

Transgenic (Constitutively active, Inserted expressed sequence)

VIEW GENETICS

### RESEARCH APPLICATIONS

Research Tools
Cancer Research

VIEW ALL RESEARCH APPLICATIONS

### BASE PRICE

**Starting at:**

$278.00 Domestic price for female 4-week

VIEW PRICE LIST

### Detailed Description

These Smo/Smo transgenic mice express the constitutively active point mutation, SmoA1, of the mouse smoothened homolog (Drosophila) (Smo) gene, under the control of the 1kb mouse neurogenic differentiation 2 (Neurod2) promoter. Transgene expression is specific to cerebellar granule cells, as observed by His tag staining. Tumor incidence in mice homozygous for the transgene is 85% by one month of age and 94% by two months of age, with an average age of onset of related traits being four months. Traits associated with advanced tumors include enlarged posterior fossa, and/or tilted head, and hunched posture. Weight loss and an ungroomed appearance are also common. The disease progresses to leptomeningeal metastasis of the brain and spine. Once clinical...
symptoms are noted, survival is one to two weeks. This mutant mouse strain may be useful in studies of medulloblastoma and metastasis.

Genotyping Protocols
QPCR: Tg(Neurod2-Smo*A1)
Standard PCR: Tg(Neurod2-Smo*A1)
Genotyping resources and troubleshooting

Dietary Information
LabDiet® 5K52 formulation (6% fat)

Breeding Considerations
When maintaining a live colony, these mice can be bred as homozygotes. However, subclinical tumor incidence in homozygotes is 85% by 1 month of age and 94% by 2 months of age. The average age of onset of clinical tumor symptoms at four months. Once clinical symptoms are noted, survival is 1-2 weeks. It is not uncommon for female breeders to develop a tumor while pregnant or nursing. When this occurs, pups are fostered into another age-matched litter. The Donating Investigator reports that some breeder pairs will produce only one litter while most will have three litters before tumor formation.

Additional Breeding and Husbandry Support

Mating System
Homozygote x Homozygote
### Pricing & Availability

Live mice available in varying quantities. Ask Customer Service for details.

#### Domestic

**Live Mouse**

<table>
<thead>
<tr>
<th>AGE</th>
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<th>GENOTYPE</th>
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<tr>
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