Vglut2-ires-Cre knock-in mice have Cre recombinase expression directed to excitatory glutamatergic neuron cell bodies, without disrupting endogenous vesicular glutamate transporter 2 expression. These mice may be used to generate conditional mutations for studying gain-or-loss of function and/or fate mapping related to glutamatergic neurons.

Of note, the same Vglut2-ires-Cre knock-in allele is also available on a mixed C57BL/6;FVB;129S6 genetic background as Stock No. 016963.

Donating Investigator
Bradford B. Lowell, Beth Israel Deaconess Med Cntr (Harvard)
Melissa R Warden, Cornell University

GENETIC OVERVIEW

**Genetic Background**

- Slc17a6<sup>tm2(cre)Lowl</sup>

**Generation**

- N6+pN2
- (2021-07-22 00:00:00)

**Slc17a6<sup>tm2(cre)Lowl</sup>**

**Allele Type**

- Targeted (Recombinase-expressing)

**Gene Symbol**

- Slc17a6

**Gene Name**

- solute carrier family 17 (sodium-dependent inorganic phosphate cotransporter), member 6

RESEARCH APPLICATIONS

- Research Tools
- Cancer Research
- Neurobiology Research

Check out the NEW Design
Vglut2-ires-Cre knock-in mice have Cre recombinase expression directed to excitatory glutamatergic neuron cell bodies, without disrupting endogenous vesicular glutamate transporter 2 expression. Specifically, Cre recombinase activity is detected in excitatory glutamatergic, VGLUT2 positive, neuron cell bodies in the thalamus, paraventricular nucleus, nucleus of the lateral olfactory tract, basolateral nucleus of the amygdala, ventromedial hypothalamus, piriform cortex, posterior hypothalamus, ventral premammillary nucleus, subthalamus, medial geniculate nucleus, reticulotegmental nucleus, pontine gray, external cuneate nucleus, and lateral reticular nucleus. When crossed with a strain containing loxP sequences, Cre-mediated recombination results in tissue-specific deletion of flanked sequences in the offspring. Homozygous Vglut2-ires-Cre knock-in mice are viable and fertile with no reported abnormalities.

In an attempt to offer alleles on well-characterized or multiple genetic backgrounds, alleles are frequently moved to a genetic background different from that on which an allele was first characterized. The phenotype described above is for Vglut2-ires-Cre knock-in mice on a mixed C57BL/6;FVB;129S6 genetic background (Stock No. 016963). It should be noted that the phenotype of this C57BL/6J-congenic line (Stock No. 028863 Vglut2-ires-Cre knock-in (C57BL/6J)) could vary from that originally described for mice on other genetic backgrounds. We will modify the strain description if necessary as published results become available.
**Slc17a6<sup>m2(cre)Lowl</sup>**

**Disease/Phenotype**

**Disease Terms**

**Research Areas By Phenotype**

**Mammalian Phenotype Terms by Genotype**

**References**

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**Technical Support**

[Contact Technical Support]

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**Genotyping Protocols**
- **Separated PCR:** GAL Panel
- **Standard PCR:** Slc17a6-Alternate 1

Genotyping resources and troubleshooting

**Breeding Considerations**

Homozygous mice are viable and fertile with no reported abnormalities. When maintaining a live colony at The Jackson Laboratory Repository, homozygous mice may be bred together.

**Additional Breeding and Husbandry Support**

**Mating System**
- Homozygote x Homozygote

**Citation**

When using the Vglut2-ires-cre knock-in (C57BL/6J) mouse strain in a publication, please cite the originating article(s) and include JAX stock #028863 in your Materials and Methods section.

**Animal Health Reports**

**Facility Barrier Level Descriptions**

- **AX27 (Maximum)**
Pricing & Availability

Available Now

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

Domestic

Pricing effective for USA, Canada and Mexico shipping destinations

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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
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

Related Strains

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