This CRISPR/Cas9 generated mutant of the Adnp (activity-dependent neuroprotective protein) gene carries a 14 nucleotide deletion in exon 5. Mice heterozygous for the allele exhibit learning deficits and maybe useful for the study of Van der Aa syndrome.

Donating Investigator
Frank Kooy, University of Antwerp
CRISPR/Cas9 endonuclease mediated genome editing of the Adnp (activity-dependent neuroprotective protein) gene introduced a 14 nucleotide deletion in exon 5. The targeted Adnp gene encodes a putative transcription factor that is involved in chromatin remodelling. Mutations in Adnp are associated with Helsmoortel-Van der Aa syndrome, a condition characterized by learning disabilities and autism spectrum disorder. Mice heterozygous for the mutation are viable and fertile. However, the donating investigator reports that heterozygote x wild type matings produce less than the expected 50% of pups carrying the mutant allele. In addition, heterozygote x heterozygote matings have not produced pups under standard breeding conditions. Mice heterozygous for the allele exhibit learning deficits as demonstrated in the in the Morris water maze test as well as increased anxiety and repetitive behavior. This strain maybe useful for the study of Helsmoortel-Van der Aa syndrome, autism and learning deficits in general and specific types of chromatin remodeling.

This model is made available by Frank Kooy (University of Antwerp) with support from the Simons Foundation Autism Research Initiative (SFARI).
Genotyping Protocols
Sanger sequencing: Adnp

Genotyping resources and troubleshooting

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

Breeding Considerations
When maintaining a live colony, heterozygote mice may be bred to wild type from the colony or C57BL/6NJ mice (Stock No. 005304). Heterozygous x heterozygote matings are non-productive. Heterozygote x wild type matings produce less than the expected number of pups carrying the mutant allele.

Additional Breeding and Husbandry Support
Mating System
Heterozygote x Wild-type
Wild-type x Heterozygote

Citation
When using the C57BL/6-Adnp<sup>emf1<sup>Ant</sup></sup>/J mouse strain in a publication, please cite the originating article(s) and include JAX stock #033128 in your Materials and Methods section.

Animal Health Reports
Facility Barrier Level Descriptions

- FGB29 (F29) (Standard)

Pricing & Availability
Live mice available in varying quantities. Ask Customer Service for details.
### LIVE MOUSE

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### BREEDER PAIR

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**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.

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**Terms Of Use**

**TERMS OF USE**

*General Terms and Conditions*

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**ADDITIONAL USE RESTRICTIONS APPLY**

The use of this mouse model is subject to the terms and conditions of the Limited License from The Broad
Institute.
The use of this mouse model is subject to the terms and conditions of the Limited Use Label License from Caribou Biosciences, Inc.

LICENSING INFORMATION
Phone: 207-288-6470
Email: TechTran@jax.org

Related Strains

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