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 Helsmoortel-Van der Aa syndrome.

Donating Investigator
Frank Kooy, University of Antwerp
Details

Detailed Description

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 Heismooertel-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 Morris water maze test as well as increased anxiety and repetitive behavior. This strain maybe useful for the study of Heismooertel-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).

Development

Control Suggestions

Genetics

Adnp\textsuperscript{em1Ant}

Disease/Phenotype

Disease Terms

Research Areas By Phenotype

Mammalian Phenotype Terms by Genotype
Genotyping Protocols
Genotyping resources and troubleshooting

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/6N-Adnp<sup>em1Ant</sup>/J mouse strain in a publication, please cite the originating article(s) and include JAX stock #033128 in your Materials and Methods section.

Pricing & Availability

Available for Pre-order

Estimated to begin distribution on Mar 15, 2021

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<thead>
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<th>AGE</th>
<th>SEX</th>
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<td>Female</td>
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<td>Approx 4-8 weeks</td>
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<td>$78.51</td>
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</table>
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Email: TechTran@jax.org

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### SEX | GENOTYPE | PRICE
---|---|---
Female | Heterozygous for Adnp^{entAnt} | $333.51
Male | Wild-type for Adnp^entAnt | $333.51
Female | Wild-type for Adnp^{entAnt} | $333.51
Male | Heterozygous for Adnp^{entAnt} | $333.51

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