Adcy3 KO mice have a lacZ gene replacing the coding region of the adenylate cyclase 3 gene. Mice may be useful when studying olfactory receptor signalling and insulin regulation in response to a high fat diet.
Details

Detailed Description

These mice contain have the endogenous adenylate cyclase 3 (Adcy3) promoter driving expression of a β-galactosidase (lacZ) gene and disrupting expression of Adcy3. The Adcy3 gene encodes for a Ca2+-calmodulin-sensitive adenylate cyclase that catalyzes cAMP formation and is involved in olfactory receptor signalling. This targeted mutant was created and characterized by Deltagen, Inc. View phenotypic data developed by Deltagen. LacZ expression is detectable in brain, Harderian glands, aorta, heart, lung, kidney, urinary bladder, salivary glands, tongue, external ear, male and female reproductive systems. In many of the tissues with detectable expression, lacZ expression is detectable in blood vessels. Homozygous mice fail to survive past weaning.

Recent studies have shown Adcy3 to be important in regulating insulin levels and body fat accumulation in response to a high fat diet.

Development

Expression Data

Control Suggestions

Genetics

Adcy3^tm1Dgen

Disease/Phenotype

Disease Terms

Research Areas By Phenotype
Genotyping Protocols
Standard PCR: Adcy3
Genotyping resources and troubleshooting

Citation
When using the B6.129P2-Adcy3<sup>tm1Dgen</sup>/J mouse strain in a publication, please cite the originating article(s) and include JAX stock #005773 in your Materials and Methods section.

Animal Health Reports
Facility Barrier Level Descriptions

Production of mice from cryopreserved embryos or sperm occurs in a maximum barrier room, G200

Pricing & Availability

Typically mice are recovered in 10-14 weeks. Contact Customer Service to place an order or for more information.

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Terms are granted by individual review and stated on the customer invoice(s) and account statement. These transactions are
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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.

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