B6.FVB-Tg(Ddx4-cre)1Dcas/KnwJ

Stock No: 018980 | Vasa-Cre

Congenic, Transgenic

CRITICAL RECOVERY

PLACE ORDER

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

Also Known As: Vasa-Cre

Ddx4-Cre (Vasa-Cre) transgenic mice have Cre recombinase expression directed to male and female embryonic germ cells. These mice may be useful in generating conditional germ cell knock-outs in both males and females for studies including infertility, gonadogenesis, gametogenesis, and the assembly, activation, and growth of primordial follicles.

In Goodwin et al. 2017 bioRxiv, it was discovered that Ddx4-Cre founder line 1 has more than 20 transgene copies integrated on chromosome 18 that caused a 1098 kbp deletion encompassing two loci - neuropilin (NRP) and tolloid (TLL)-like 1 (Neto1) and cerebellin 2 precursor protein (Cbln2).

Donating Investigator

Dr. Barbara Knowles, Institute of Medical Biology

READ MORE +

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tg(Ddx4-cre)1Dcas</td>
<td></td>
</tr>
</tbody>
</table>

Allele Type

Transgenic (Recombinase-expressing, Null/Knockout)

VIEW GENETICS

Research Tools

VIEW ALL RESEARCH APPLICATIONS
Details

Detailed Description

Vasa-Cre (Ddx4-Cre) transgenic mice express Cre recombinase under the direction of the mouse Ddx4 promoter. In Goodwin et al. 2017 bioRxiv, analysis of the Ddx4-Cre parental strain (Stock No. 006954) identified more than 20 transgene copies integrated on chromosome 18 that caused a 1098 kbp deletion encompassing two loci - neuropilin (NRP) and tolloid (TLL)-like 1 (Neto1) and cerebellin 2 precursor protein (Cbln2). The deletion results in a functional knock-out of both genes in homozygous mice. Mice hemizygous for this Ddx4-Cre transgene are viable and fertile. Transgenic cre activity is directed to male and female germ cells starting at embryonic day e15-e18. When bred with mice containing a loxP-flanked sequence of interest, Cre-mediated recombination will result in deletion of the flanked sequence. In such breedings, occasional hemizygous mice may exhibit variegated cre expression in skin epithelium or global cre expression (<20% incidence). Differential parent-of-origin transgene expression is observed. When the mother harbors Ddx4-Cre, virtually all progeny undergo global Cre-mediated recombination, even those that do not inherit the transgene (which may be useful in converting a "floxed" allele to a null while obviating the need to perform additional crosses to remove the transgene). To achieve germ-line specific Cre-mediated recombination in offspring, paternal Ddx4-Cre mice should be used.

In crosses with some floxed alleles, global recombination may occur even when males are used as the Ddx4-Cre carriers. The basis of this "paternal" effect is not known, but may relate to the presence of Cre protein in sperm. This global recombination can occur more frequently with older males. Thus, when paternal-effect global recombination is observed, it is recommended that the youngest available Ddx4-Cre males be used for breeding (ideally 5-6 weeks, but less than 9 weeks of age). Once a male has proven to repeatedly give rise to globally-recombined progeny, he should no longer be used as a breeder.

These Ddx4-Cre mice may be useful in generating conditional germ cell knock-outs in both males and females for studies including infertility, gonadogenesis, gametogenesis, and the assembly, activation, and growth of primordial follicles.

While another germ line cre-expressing strain, ZP3-Cre (see Stock No. 003651), permits recombination/deletion of loxP-flanked genes in growing follicles, Ddx4-Cre mice have additional cre expression in primordial follicles (early oogenesis) and in the male germline.

If the recombinase activity pattern of this allele is further characterized by the Genetic Resource Science group at The Jackson Laboratory, such findings will be reported on the Mouse Genome Informatics (MGI) Allele Detail entry (Tg(Ddx4-cre)1Dcas). This same information would also be found searching the MGI Recombinase Activity database.

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. This is the case for the strain above. It should be noted that the phenotype could vary from that originally described. We will modify the strain description if necessary as published results become available.

Development

Expression Data

Control Suggestions
Genotyping Protocols
QPCR: Generic Cre Quantitative PCR
Melt Curve Analysis: Tg(Ddx4-Cre)
Probe: Tg(Ddx4-cre)1Dcas-Chr18-alternate1
Genotyping resources and troubleshooting

Breeding Considerations
When maintaining a live colony, hemizygous mice may be bred together or to wildtype siblings.
Additional Breeding and Husbandry Support

Citation
When using the Ysac5Cre mouse strain in a publication, please cite the originating article(s) and include JAX stock #018980 in your Materials and Methods section.

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.
We will fulfill your order by providing at least two carriers for each strain ordered. The total number, sex, and genotypes provided will vary, although typically 8 or more animals are provided. **Please check genotypes which will be recovered.** While the genotypes of all animals produced will be communicated to you prior to scheduling shipment, the genotypes of animals provided may not reflect the mating scheme and genotypes described in the strain description. **Animals are typically ready to ship in 11-14 weeks.** If a second recovery is required to produce the minimum number of animals, then delivery time would increase to approximately 25 weeks. If we fail to produce animals of the correct genotype, you will not be charged. We cannot guarantee the reproductive success of mice shipped to your facility. If the mice are lost after the first three days (post-arrival) or do not produce progeny at your facility, a new order and fee will be necessary. Cryorecovery to establish a Dedicated Supply for greater quantities of mice. Mice recovered can be used to establish a dedicated colony to contractually supply you mice according to your requirements. Price by quotation.

### Related Products and Services

<table>
<thead>
<tr>
<th>Product</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frozen Mouse Embryo</td>
<td>$2,595.00 per straw or vial</td>
</tr>
</tbody>
</table>

### 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.

### Terms Of Use

**Terms of Use**

**General Terms and Conditions**

**QUESTIONS ABOUT TERMS OF USE**

**Licensing Information**
Phone: 207-288-6470
Email: TechTran@jax.org

**JAX® Mice, Products & Services Conditions of Use**

“MICE” means mouse strains, their progeny derived by inbreeding or crossbreeding, unmodified derivatives from mouse strains or their progeny supplied by The Jackson Laboratory (“JACKSON”). “PRODUCT(S)” means biological materials supplied by JACKSON, and their derivatives. “SERVICES” means projects conducted by JACKSON for other parties that may include but are not limited to the use...
No Warranty

MICE, PRODUCTS AND SERVICES ARE PROVIDED “AS IS”. JACKSON EXTENDS NO WARRANTIES OF ANY KIND, EITHER EXPRESS, IMPLIED, OR STATUTORY, WITH RESPECT TO MICE, PRODUCTS OR SERVICES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR ANY WARRANTY OF NON-INFRINGEMENT OF ANY PATENT, TRADEMARK, OR OTHER INTELLECTUAL PROPERTY RIGHTS.

Credit for PRODUCTS or SERVICES

In case of dissatisfaction for a valid reason and claimed in writing by a purchaser within ninety (90) days of receipt of, PRODUCTS or SERVICES, JACKSON will, at its option, provide credit or replacement for the PRODUCT received or the SERVICES provided; JACKSON makes no other representations and this shall be the exclusive remedy of the purchaser. Please note specific policy for live mice.

Animal Care and Use for SERVICES

Consistent with the requirement for a written understanding regarding animal care and use, the JACKSON Animal Care and Use Committee will review the animal care and use protocol(s) associated with any SERVICES to be performed at JACKSON, and JACKSON shall have ultimate responsibility and authority for the care of animals while on site or in JACKSON custody.

No Liability

In no event shall JACKSON, its trustees, directors, officers, employees, and affiliates be liable for any causes of action or damages, including any direct, indirect, special, or consequential damages, arising out of the provision of MICE, PRODUCTS, or SERVICES, including economic damage or injury to property and lost profits, and including any damage arising from acts or negligence on the part of JACKSON, its agents or employees. Unless prohibited by law, in purchasing or receiving MICE, PRODUCTS, or SERVICES from JACKSON, purchaser or recipient, or any party claiming by or through them, expressly releases and discharges JACKSON from all such causes of action or damages, and further agrees to defend and indemnify JACKSON from any costs or damages arising out of any third party claims.

MICE, PRODUCTS or SERVICES are to be used in a safe manner and in accordance with all applicable governmental rules and regulations.

The foregoing represents the General Terms and Conditions applicable to JACKSON’s MICE, PRODUCTS or SERVICES. In addition, special terms and conditions of sale of certain MICE, PRODUCTS, or SERVICES may be set forth separately in JACKSON web pages, catalogs, price lists, contracts, and/or other documents, and these special terms and conditions shall also govern the sale of these MICE, PRODUCTS and SERVICES by JACKSON, and by its licensees and distributors.

Acceptance of delivery of MICE, PRODUCTS or SERVICES shall be deemed agreement to these terms and conditions. No purchase order or other document transmitted by purchaser or recipient that may modify the terms and conditions hereof, shall be in any way binding on JACKSON, and instead the terms and conditions set forth herein, including any special terms and conditions set forth separately, shall govern the sale of MICE, PRODUCTS or SERVICES by JACKSON.