The Jackson Laboratory

B6(129S4)-Et(icre/ERT2)14163Rdav/J
Stock No: **012689**
Enhancer Trap

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

PLACE ORDER

Email Download PDF Help

useful for generating conditional mutations for studying gain or loss of function and/or fate mapping in brain tissues.

Donating Investigator

Ronald L Davis, The Scripps Research Institute Florida

READ MORE +

GENETIC OVERVIEW

Genetic Background **Generation**

Et(icre/ERT2)14163Rdav

Allele Type

Transgenic (Recombinase-expressing, Inducible)

VIEW GENETICS

RESEARCH APPLICATIONS

Research Tools
Neurobiology Research

VIEW ALL RESEARCH APPLICATION

BASE PRICE

Starting at:

$2,854.50 Domestic price Cryo Recovery

VIEW PRICE LIST

Details

Detailed Description

Mice hemizygous for this enhancer trap lentiviral transgene are viable and fertile, with expression of an iCreERT2 fusion gene (an optimized variant of Cre recombinase [iCre; improved with mammalian codon usage, removed putative cryptic splice sites, altered stop codon, and reduced CpG content to limit the chances of epigenetic silencing in mammals] fused to Cre-ER^{T2} [a G400V/M543A/L544A triple mutation of the human estrogen receptor ligand binding domain]) under control of the promoter/enhancer regions surrounding the site where the enhancer trap lentiviral transgene randomly inserted. Cre-ERT2 fusion gene activity is designed to be inducible (observed following tamoxifen administration).

Specifically, the donating investigator reports Cre recombinase activity in brain tissues as:
only in hypothalamus (perhaps arcuate nucleus only), no Cre recombinase activity is observed prior to tamoxifen exposure, no Cre recombinase activity in other tested tissues.

When these enhancer trap lentiviral transgenic mice are bred with mice containing *loxP*-flanked sequences, tamoxifen-inducible Cre-mediated recombination will result in deletion of the floxed sequences in the *cre*-expressing cells of the double mutant offspring.

For characterization information, see images at the Allen Institute for Brain Science website (Et(icre/ERT2)14163Rdav images).

The Cre-ERT2 fusion protein consists of Cre recombinase fused to a triple mutant form of the human estrogen receptor which does not bind its natural ligand (17β-estradiol) at physiological concentrations but will bind the synthetic estrogen receptor ligands 4-hydroxytamoxifen (OHT or tamoxifen) and, with lesser sensitivity, ICI 182780. Restricted to the cytoplasm, Cre-ERT2 can only gain access to the nuclear compartment after exposure to tamoxifen. To counteract the mixed estrogen agonist effects of tamoxifen injections, which can result in late fetal abortions in pregnant mice, progesterone may be coadministered.

Development

Expression Data

Control Suggestions

Selected References

Genetics

Et(icre/ERT2)14163Rdav

Disease/Phenotype

Disease Terms

Research Areas By Phenotype

Mammalian Phenotype Terms by Genotype

References

Technical Support

CONTACT TECHNICAL SUPPORT

Genotyping Protocols

Standard PCR:Generic iCre
Standard PCR:Generic iCre
Probe:Generic iCre Probe
Genotyping resources and troubleshooting

Breeding Considerations

When maintaining a live colony, transgenic carrier mice may be bred together, to wildtype (noncarrier) siblings, or to C57BL/6J inbred mice (Stock No. 000664).

Additional Breeding and Husbandry Support

Citation

When using the B6(129S4)-Et(icre/ERT2)14163Rdav/J mouse strain in a publication, please cite the originating article(s) and include JAX stock #012689 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

Cryo Recovery

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

Domestic | **International**

Pricing effective for USA, Canada and Mexico shipping destinations

CRYORECOVERY - DOMESTIC PRICING		
SERVICE/PRODUCT	DESCRIPTION	PRICE
Cryo Recovery	Hemizygous or Non carrier for Et(icre/ERT2)14163Rdav	$2,854.50

RELATED PRODUCTS AND SERVICES		
Frozen Mouse Embryo	B6(129S4)-Et(icre/ERT2)14163Rdav/J	$2595.00

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.

Terms Of Use

TERMS OF USE

General Terms and Conditions

QUESTIONS ABOUT TERMS OF USE

ADDITIONAL USE RESTRICTIONS APPLY

Use of MICE by companies or for-profit entities requires a license prior to shipping.
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

All

By Allele

By Gene

By Collection