

STOCK Tg(Pfkl)224Yg/J

Stock No: 002359 | PFKL

 Transgenic

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resembling that of the endogenous enzyme.

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GENETIC OVERVIEW

Genetic Background

Generation

Tg(Pfkl)224Yg

Alele Type

Transgenic (Inserted expressed sequence)

VIEW GENETICS

RESEARCH APPLICATIONS

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BASE PRICE

Starting at:

\$2,854.50 Domestic price Cryo Recovery

Details

Detailed Description

The human liver-type subunit of the key glycolytic enzyme, phosphofructokinase (PFKL), is encoded by a gene residing on chromosome 21. This chromosome, when triplicated, causes the phenotypic expression of Down's syndrome (trisomy 21). Increased phosphofructokinase activity, a result of gene dosage, is commonly found in erythrocytes and fibroblasts from Down's syndrome patients. We describe the construction of transgenic mice overexpressing PFKL for use as a well-defined model system, in which the effects of PFKL overexpression in various tissues, and throughout development, can be studied. Mice transgenic for a murine PFKL 'gene cDNA' hybrid construct were found to overexpress PFKL in a tissue-specific manner resembling that of the endogenous enzyme. Although unchanged in adult brain, PFK specific activity was found to have been almost doubled in brains of embryonic transgenic-PFKL mice, suggesting that the extra copies of the PFKL gene are expressed during the developmental period. This pattern of overexpression of PFKL in brains of transgenic-PFKL mice suggests that gene-dosage effects may be temporally separated from some of their consequences, adding an additional layer of complexity to the analysis of gene dosage in trisomy 21. (Elson et al., Biochem J. 1994, 299:409-15)

Development

Expression Data

Control Suggestions

Selected References

Genetics

Tg(Pfkl)224Yg

Disease/Phenotype

Disease Terms

Research Areas By Phenotype

Mammalian Phenotype Terms by Genotype

- Technical Support

C O N T A C T T E C H N I C A L S U P P O R T

Genotyping Protocols
[Genotyping resources and troubleshooting](#)

Citation

When using the PFKL mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #002359 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



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Domestic | **International**

Pricing effective for USA, Canada and Mexico shipping destinations

CRYORECOVERY - DOMESTIC PRICING

SERVICE/PRODUCT	DESCRIPTION	PRICE
Cryo Recovery	Homozygous for Tg(Pfkl)224Yg, 1 pair minimum	\$2,854.50

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