

DESCRIPTION

Species Reactivity	Human/Mouse/Rat
Specificity	Detects human Muscle Phosphofructokinase/PFKM in direct ELISAs and Western blots. Detects mouse and rat Muscle Phosphofructokinase/PFKM in Western blots.
Source	Monoclonal Mouse IgG _{2B} Clone # 842735
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human Muscle Phosphofructokinase/PFKM Asn674-Val780 Accession # P08237
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

Western Blot Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

PFKM (PhosphoFructoKinase, Muscle type; also PFK-A and Phosphohexokinase) is a 85-86 kDa member of the phosphofructokinase family, two domain subfamily of enzymes. It is one of three functionally related enzymes, all expressed by distinct genes. While PFKM is expressed by virtually all cells, its name is based on the fact that skeletal muscle expresses only the PFKM isotype. PFK catalyzes the essentially irreversible phosphorylation of Fru-6-P, forming Fru-1,6-bisP. This determines the rate of cellular glycolysis. As a monomer, PFKM is unstable, and following synthesis, PFKM forms low activity homodimers. High activity comes with tetramerization/oligomerization. In all cases, multimerization is associated with PFKM interaction with various components of the cell cytoskeleton. Human PFKM is 780 amino acids (aa) in length. It contains a 740 aa catalytic region (aa 16-755) plus one utilized phosphorylation site at Thr2. There are at least two potential isoform variants. One contains an alternative start site 71 aa upstream of the standard site, while another shows a deletion of aa 282-312. Proteolysis of PFKM apparently occurs, generating 45-47 kDa fragments. Over aa 674-780, human PFKM shares 98% aa sequence identity with mouse PFKM.

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.