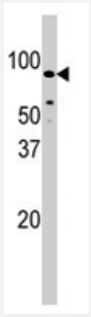
PFKM polyclonal antibody

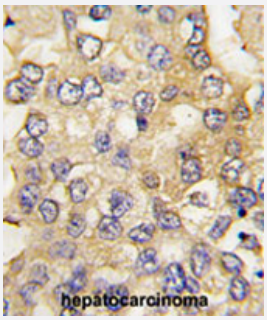
Catalog # PAB2142 Size 400 uL

Applications



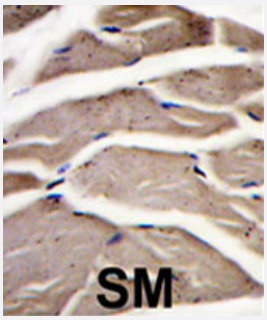
Western Blot (Cell lysate)

Western blot analysis of PFKM polyclonal antibody (Cat # PAB2142) in HeLa cell line lysate. PFKM (arrow) was detected using the purified Polyclonal antibody.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections)

Formalin-fixed and paraffin-embedded human hepatocellular carcinoma reacted with PFKM polyclonal antibody (Cat # PAB2142) , which was peroxidase-conjugated to the secondary antibody, followed by DAB staining.
This data demonstrates the use of this antibody for immunohistochemistry ; clinical relevance has not been evaluated.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections)

Formalin-fixed and paraffin-embedded human skeletal muscle reacted with PFKM polyclonal antibody (Cat # PAB2142) , which was peroxidase-conjugated to the secondary antibody, followed by DAB staining.
This data demonstrates the use of this antibody for immunohistochemistry ; clinical relevance has not been evaluated.

Specification

Product Description	Rabbit polyclonal antibody raised against synthetic peptide of PFKM.
Immunogen	A synthetic peptide (conjugated with KLH) corresponding to C-terminus of human PFKM.

Host	Rabbit
Reactivity	Human
Form	Liquid
Purification	Protein G purification
Recommend Usage	Western Blot (1:1000) Immunohistochemistry (1:50-100) The optimal working dilution should be determined by the end user.
Storage Buffer	In PBS (0.09% sodium azide)
Storage Instruction	Store at 4°C. For long term storage store at -20°C. Aliquot to avoid repeated freezing and thawing.
Note	This product contains sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which shoul d be handled by trained staff only.

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Gene Info — PFKM

Entrez GeneID	5213
Protein Accession#	NP_000280;P08237
Gene Name	PFKM
Gene Alias	GSD7, MGC8699, PFK-1, PFK-M, PFKX

Gene Description	phosphofructokinase, muscle
Omim ID	232800 610681
Gene Ontology	Hyperlink
Gene Summary	The PFKM gene encodes the muscle isoform of phosphofructokinase (PFK) (ATP:D-fructose-6-phosphate-1-phosphotransferase, EC 2.7.1.11). PFK catalyzes the irreversible conversion of fructose-6-phosphate to fructose-1,6-bisphosphate and is a key regulatory enzyme in glycolysis. Mammalian PFK is a tetramer made up of various combinations of 3 subunits: muscle (PFKM), liver (PFKL; MIM 171860), and platelet (PFKP; MIM 171840), the genes for which are located on chromosomes 12q13, 21q22, and 10p, respectively. The composition of the tetramers differs according to the tissue type. Muscle and liver PFK are a homotetramers of 4M and 4L subunits, respectively. Erythrocytes contain both L and M subunits, which randomly tetramerize to form M4, L4, and M3L, M2L2, and ML3 hybrid forms of the holoenzyme (Vora et al., 1980 [PubMed 6444721]; Raben and Sherman, 1995 [PubMed 7550225]).[supplied by OMIM
Other Designations	phosphofructokinase, muscle type|phosphofructokinase, polypeptide X

Publication Reference

- PFKM gene defect and glycogen storage disease GSDVII with misleading enzyme histochemistry.

  Auranen M, Palmio J, Ylikallio E, Huovinen S, Paetau A, Sandell S, Haapasalo H, Viitaniemi K, Piirila P, Tyynismaa H, Udd B.

  Neurology. Genetics 2015 Jun; 1(1):e7.

  Application: IHC, Human, Human muscle biopsy

- Physical and genetic mapping of the muscle phosphofructokinase gene (PFKM): reassignment to human chromosome 12q.

  Howard TD, Akots G, Bowden DW.

  Genomics 1996 May; 34(1):122.

  Application: WB-Ce, WB-Tr, Human, Mammalian cells

- Nonsense mutation in the phosphofructokinase muscle subunit gene associated with retention of intron 10 in one of the isolated transcripts in Ashkenazi Jewish patients with Tarui disease.

  Vasconcelos O, Sivakumar K, Dalakas MC, Quezado M, Nagle J, Leon-Monzon M, Dubnick M, Gajdusek DC, Goldfarb LG.

  PNAS 1995 Oct; 92(22):10322.

  Application: WB-Ti, Human, Human skeletal muscle tissues

- A 5' splice junction mutation leading to exon deletion in an Ashkenazic Jewish family with phosphofructokinase deficiency (Tarui disease).

  Raben N, Sherman J, Miller F, Mena H, Plotz P.

  The Journal of Biological Chemistry 1993 Mar; 268(7):4963.

Pathway

- Biosynthesis of alkaloids derived from histidine and purine
- Biosynthesis of alkaloids derived from ornithine
- Biosynthesis of alkaloids derived from shikimate pathway
- Biosynthesis of alkaloids derived from terpenoid and polyketide
- Biosynthesis of phenylpropanoids
- Biosynthesis of plant hormones
- Biosynthesis of terpenoids and steroids
- Fructose and mannose metabolism
- Galactose metabolism
- Glycolysis / Gluconeogenesis
- Metabolic pathways
- Pentose phosphate pathway

Disease

- Drug Toxicity
- Edema
- Hypercholesterolemia
- Tobacco Use Disorder