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PFKL Antibody (C-term L684)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8136B

Specification

PFKL Antibody (C-term L684) - Product Information

Application	**IHC-P, WB,E**
Primary Accession	P17858
Reactivity	**Human, Mouse**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Antigen Region	**669-699**

PFKL Antibody (C-term L684) - Additional Information

Gene ID 5211

Other Names
ATP-dependent 6-phosphofructokinase, liver type {ECO:0000255|HAMAP-Rule:MF_03184}, ATP-PFK {ECO:0000255|HAMAP-Rule:MF_03184}, PFK-L, 27111 {ECO:0000255|HAMAP-Rule:MF_03184}, 6-phosphofructokinase type B, Phosphofructo-1-kinase isozyme B, PFK-B, Phosphohexokinase {ECO:0000255|HAMAP-Rule:MF_03184}, PFKL

Target/Specificity
This PFKL antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 669-699 amino acids from the C-terminal region of human PFKL.

Dilution
IHC-P~~1:50~100
WB~~1:1000
E~~Use at an assay dependent concentration.

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
PFKL Antibody (C-term L684) is for research use only and not for use in diagnostic or therapeutic procedures.

PFKL Antibody (C-term L684) - Protein Information

Name PFKL (HGNC:8876)

Function Catalyzes the phosphorylation of D-fructose 6-phosphate to fructose 1,6-bisphosphate by ATP, the first committing step of glycolysis (PubMed:22923583). Negatively regulates the phagocyte oxidative burst in response to bacterial infection by controlling cellular NADPH biosynthesis and NADPH oxidase-derived reactive oxygen species. Upon macrophage activation, drives the metabolic switch toward glycolysis, thus preventing glucose turnover that produces NADPH via pentose phosphate pathway (By similarity).

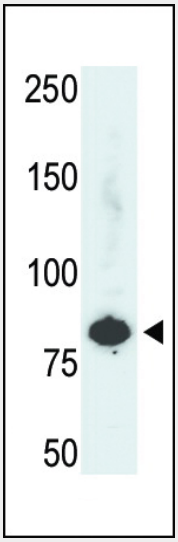
Cellular Location
Cytoplasm {ECO:0000255|HAMAP-Rule:MF_03184}.

PFKL Antibody (C-term L684) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

PFKL Antibody (C-term L684) - Images



The anti-PFKL Pab (Cat. #AP8136b) is used in Western blot to detect PFKL in HepG2 cell lysate.

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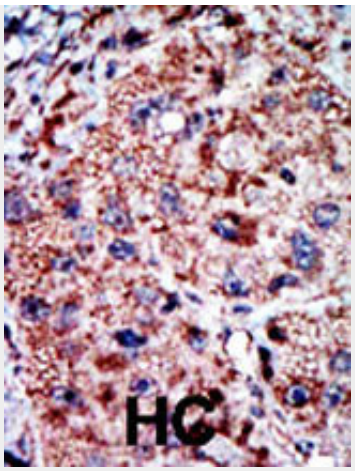

Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

PFKL Antibody (C-term L684) - Background

Phosphofructokinase (PFK), a major regulatory enzyme in all cells of the body, catalyzes the metabolism of sugar, and thereby is pivotal in the production of energy to maintain normal cell function. In human there are three structural loci controlling PFK: M (muscle), L (liver), and P (platelet) type subunits, which are variably expressed in different tissues; human diploid fibroblasts and leukocytes express all three genes. PFK, a tetramer formed by the random association of the products of two separate gene loci to form the five possible tetramers. PFKs of muscle and liver are homotetramers of the M and L subunits, respectively. Red cells have all five isozymes: M4, M3L, M2L2, ML3, and L4. PFK is an allosteric enzyme activated by ADP, AMP, or fructose bisphosphate and inhibited by ATP or citrate. PFK catalyzes the key controlling step of glycolytic pathway. PFK deficiency can present as mild to life-threatening episodic illness. A hallmark sign of this disease is intermittent dark urine, with the color of the urine ranging from orange to dark coffee-brown, which commonly develops following strenuous exercise. The mean red cell PFK is elevated in persons with Down syndrome.

PFKL Antibody (C-term L684) - References

Strausberg, R.L., et al., Proc. Natl. Acad. Sci. U.S.A. 99(26):16899-16903 (2002).
Hattori, M., et al., Nature 405(6784):311-319 (2000).
Elson, A., et al., Genomics 7(1):47-56 (1990).
Levanon, D., et al., DNA 8(10):733-743 (1989).

PFKL Antibody (C-term L684) - Citations

- Senescence-inducing stress promotes proteolysis of phosphoglycerate mutase via ubiquitin ligase Mdm2.