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PFKL Antibody (Center K433)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8136c

Specification

PFKL Antibody (Center K433) - Product Information

Application	**WB,E**
Primary Accession	P17858
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**85018**
Antigen Region	**371-399**

PFKL Antibody (Center K433) - 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 371-399 amino acids from the Central region of human PFKL.

Dilution
WB~~1:1000

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 (Center K433) is for research use only and not for use in diagnostic or therapeutic procedures.

PFKL Antibody (Center K433) - 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).

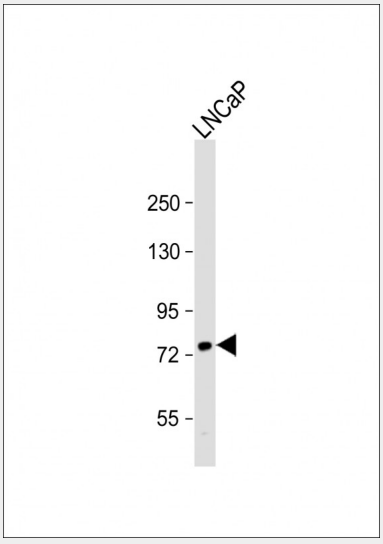
Cellular Location
Cytoplasm {ECO:0000255|HAMAP-Rule:MF_03184}.

PFKL Antibody (Center K433) - 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 (Center K433) - Images



Anti-PFKL Ctr Antibody at 1:1000 dilution + LNCaP whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 85 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

PFKL Antibody (Center K433) - 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 (Center K433) - 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 (Center K433) - Citations

- The cellular and compartmental profile of mouse retinal glycolysis, tricarboxylic acid cycle, oxidative phosphorylation, and ~P transferring kinases.