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PFKFB3 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8145b

Product Information

Application	WB, IHC-P, E
Primary Accession	Q16875
Other Accession	O35552
Reactivity	Human, Rat
Predicted	Mouse, Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	59609
Antigen Region	454-484

Additional Information

Gene ID	5209
Other Names	6-phosphofructo-2-kinase/fructose-2, 6-bisphosphatase 3, 6PF-2-K/Fru-2, 6-P2ase 3, PFK/FBPase 3, 6PF-2-K/Fru-2, 6-P2ase brain/placenta-type isozyme, Renal carcinoma antigen NY-REN-56, iPFK-2, 6-phosphofructo-2-kinase, Fructose-2, 6-bisphosphatase, PFKFB3
Target/Specificity	This PFKFB3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 454-484 amino acids from the C-terminal region of human PFKFB3.
Dilution	WB~~1:1000 IHC-P~~1:100~500 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	PFKFB3 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PFKFB3
Function	Catalyzes both the synthesis and degradation of fructose 2,6- bisphosphate.

Tissue Location Ubiquitous.

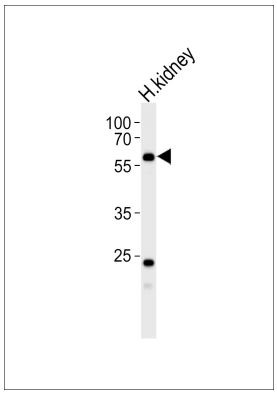
Background

Protein kinases are enzymes that transfer a phosphate group from a phosphate donor, generally the g phosphate of ATP, onto an acceptor amino acid in a substrate protein. By this basic mechanism, protein kinases mediate most of the signal transduction in eukaryotic cells, regulating cellular metabolism, transcription, cell cycle progression, cytoskeletal rearrangement and cell movement, apoptosis, and differentiation. With more than 500 gene products, the protein kinase family is one of the largest families of proteins in eukaryotes. The family has been classified in 8 major groups based on sequence comparison of their tyrosine (PTK) or serine/threonine (STK) kinase catalytic domains. The AGC kinase group consists of 63 kinases including the cyclic nucleotide-regulated protein kinase (PKA & PKG) family, the diacylglycerol-activated/phospholipid-dependent protein kinase C (PKC) family, the related to PKA and PKC (RAC/Akt) protein kinase family, the kinases that phosphorylate G protein-coupled receptors family (ARK), and the kinases that phosphorylate ribosomal protein S6 family (RSK).

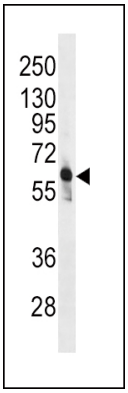
References

Navarro-Sabate, A., et al., Gene 264(1):131-138 (2001). Chesney, J., et al., Proc. Natl. Acad. Sci. U.S.A. 96(6):3047-3052 (1999). Sakakibara, R., et al., J. Biochem. 122(1):122-128 (1997). Hamilton, J.A., et al., Mol. Endocrinol. 11(4):490-502 (1997). Sakai, A., et al., J. Biochem. 119(3):506-511 (1996).

Images

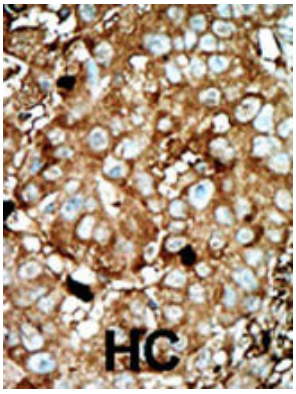


Western blot analysis of lysate from human kidney tissue lysate, using PFKFB3 Antibody (E469) (Cat. #AP8145b). AP8145b was diluted at 1:1000. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody. Lysate at 35ug.



Western blot analysis of anti-PFKFB3 Antibody (C-term)(Cat. #AP8145b) in CEM cell line lysates (35ug/lane). PFKFB3(arrow) was detected using the purified Pab.

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.

Citations

- Interleukin 6 enhances glycolysis through expression of the glycolytic enzymes hexokinase 2 and 6-phosphofructo-2-kinase/fructose-2,6-bisphosphatase-3.
- Insulin-independent promotion of chemically induced hepatocellular tumor development in genetically diabetic mice.
- Ras transformation requires metabolic control by 6-phosphofructo-2-kinase.
- Small-molecule inhibition of 6-phosphofructo-2-kinase activity suppresses glycolytic flux and tumor growth.
- Silver nanoparticles affect glucose metabolism in hepatoma cells through production of reactive oxygen species.
- The JAK2V617F oncogene requires expression of inducible phosphofructokinase/fructose-bisphosphatase 3 for cell growth and increased metabolic activity.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.