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PFKFB4 Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8154c

Product Information

Application	WB, IHC-P, E
Primary Accession	Q16877
Other Accession	Q4R8B6
Reactivity	Human, Mouse
Predicted	Monkey
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	54040
Antigen Region	266-296

Additional Information

Gene ID	5210
Other Names	6-phosphofructo-2-kinase/fructose-2, 6-bisphosphatase 4, 6PF-2-K/Fru-2, 6-P2ase 4, PFK/FBPase 4, 6PF-2-K/Fru-2, 6-P2ase testis-type isozyme, 6-phosphofructo-2-kinase, Fructose-2, 6-bisphosphatase, PFKFB4
Target/Specificity	This PFKFB4 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 266-296 amino acids from the Central region of human PFKFB4.
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	PFKFB4 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PFKFB4
Function	Synthesis and degradation of fructose 2,6-bisphosphate.

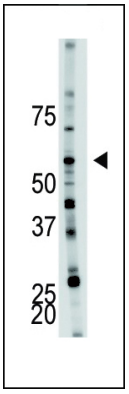
Background

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

Sakai, A., et al., J. Biochem. 119(3):506-511 (1996). Manzano, A., et al., Gene 229 (1-2), 83-89 (1999).

Images



The anti-PFKFB4 Pab (Cat. #AP8154c) is used in Western blot to detect PFKFB4 in mouse brain tissue lysate.

Citations

- 6-Phosphofructo-2-kinase/fructose-2,6-biphosphatase 4 is essential for p53-null cancer cells.
- Sertoli-secreted FGF-2 induces PFKFB4 isozyme expression in mouse spermatogenic cells by activation of the MEK/ERK/CREB pathway.
- Functional metabolic screen identifies 6-phosphofructo-2-kinase/fructose-2,6-biphosphatase 4 as an important regulator of prostate cancer cell survival.
- Nuclear targeting of 6-phosphofructo-2-kinase (PFKFB3) increases proliferation via cyclin-dependent kinases.
- Ras inhibition in glioblastoma down-regulates hypoxia-inducible factor-1alpha, causing glycolysis shutdown and cell death.