10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

HK3 (Hexokinase III) Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8139b

Product Information

Application	WB, IHC-P, E
Primary Accession	P52790
Reactivity	Human, Mouse
Predicted	Rat, Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	99025
Antigen Region	760-789

Additional Information

Gene ID	3101
Other Names	Hexokinase-3, Hexokinase type III, HK III, HK3
Target/Specificity	This HK3 (Hexokinase III) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 760-789 amino acids from the C-terminal region of human HK3 (Hexokinase III).
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 purified through a protein A column, followed by peptide affinity purification.
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	HK3 (Hexokinase III) Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	HK3 (HGNC:4925)
Function	Catalyzes the phosphorylation of hexose, such as D-glucose and D-fructose, to hexose 6-phosphate (D-glucose 6-phosphate and D- fructose 6-phosphate, respectively) (PubMed:8717435). Mediates the initial step of glycolysis by catalyzing phosphorylation of D-glucose to D-glucose 6-phosphate (PubMed:8717435).

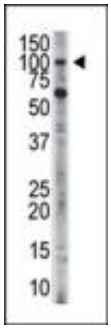
Background

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).

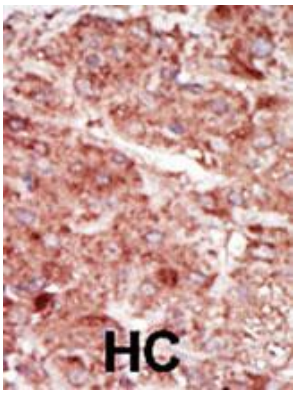
References

Furuta, H., et al., Genomics 36(1):206-209 (1996).
Palma, F., et al., Mol. Cell. Biochem. 155(1):23-29 (1996).
Colosimo, A., et al., Cytogenet. Cell Genet. 74(3):187-188 (1996).

Images

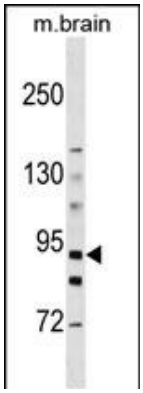


The anti-HK3 Pab (Cat. #AP8139b) is used in Western blot to detect HK3 in HL-60 cell lysate.



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.

HK3 Antibody (R775) (Cat. #AP8139b) western blot analysis in mouse brain tissue lysates (35ug/lane).This demonstrates the HK3 antibody detected the HK3 protein (arrow).



Citations

- Analyses of resected human brain metastases of breast cancer reveal the association between up-regulation of hexokinase 2 and poor prognosis.

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