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PCK2 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8094a

Product Information

Application	WB, IHC-P, IF, E
Primary Accession	Q16822
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB3640
Calculated MW	70699
Antigen Region	24-54

Additional Information

Gene ID	5106
Other Names	Phosphoenolpyruvate carboxykinase [GTP], mitochondrial, PEPCK-M, PCK2, PEPCK2
Target/Specificity	This PCK2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 24-54 amino acids from the N-terminal region of human PCK2.
Dilution	WB~~1:1000 IHC-P~~1:100~500 IF~~1:10~50 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	PCK2 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PCK2 (HGNC:8725)
Synonyms	PEPCK2
Function	Mitochondrial phosphoenolpyruvate carboxykinase that catalyzes the

conversion of oxaloacetate (OAA) to phosphoenolpyruvate (PEP), the rate-limiting step in the metabolic pathway that produces glucose from lactate and other precursors derived from the citric acid cycle (PubMed:28955899). Can play an active role in glyceroneogenesis and gluconeogenesis (PubMed:28955899). Also acts as a serine/threonine- protein kinase: phosphorylates and activates ACSL4, thereby promoting ferroptosis (PubMed:38720107).

Cellular Location Mitochondrion

Tissue Location Widely expressed..

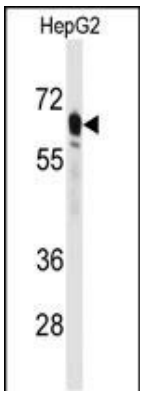
Background

This gene encodes a member of the phosphoenolpyruvate carboxykinase (GTP) family. The protein is a mitochondrial enzyme that catalyzes the conversion of oxaloacetate to phosphoenolpyruvate in the presence of GTP. A cytosolic form encoded by a different gene has also been characterized and is the key enzyme of gluconeogenesis in the liver. The encoded protein may serve a similar function, although it is constitutively expressed and not modulated by hormones such as glucagon and insulin that regulate the cytosolic form. Alternatively spliced transcript variants have been described.

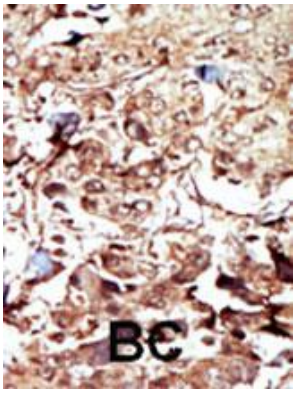
References

Strausberg, R.L., et al., Proc. Natl. Acad. Sci. U.S.A. 99(26):16899-16903 (2002).
Modaressi, S., et al., Biochem. J. 333 (Pt 2), 359-366 (1998).
Modaressi, S., et al., Biochem. J. 315 (Pt 3), 807-814 (1996).

Images

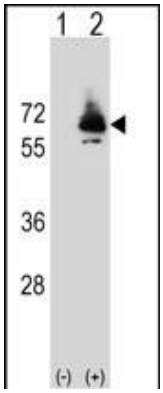


Western blot analysis of anti-PCK2 Antibody (N-term) (Cat.#AP8094a) in HepG2 cell line lysates (35ug/lane). PCK2 (arrow) was detected using the purified Pab.

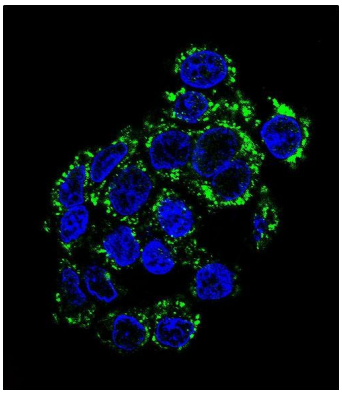


Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast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

Western blot analysis of PCK2 (arrow) using rabbit polyclonal PCK2 Antibody (Q39) (Cat. #AP8094a). 293 cell



lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected (Lane 2) with the PCK2 gene.



Confocal immunofluorescent analysis of PCK2 Antibody (N-term)(Cat#AP8094a) with HepG2 cell followed by Alexa Fluor 488-conjugated goat anti-rabbit lgG (green).DAPI was used to stain the cell nuclear (blue).