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CA4 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7479b

Product Information

Application	WB, E
Primary Accession	P22748
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB18373
Calculated MW	35032
Antigen Region	243-272

Additional Information

Gene ID	762
Other Names	Carbonic anhydrase 4, Carbonate dehydratase IV, Carbonic anhydrase IV, CA-IV, CA4
Target/Specificity	This CA4 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 243-272 amino acids from the C-terminal region of human CA4.
Dilution	WB~~1:1000 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	CA4 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CA4 (HGNC:1375)
Function	Catalyzes the reversible hydration of carbon dioxide into bicarbonate and protons and thus is essential to maintaining intracellular and extracellular pH (PubMed:15563508, PubMed:16686544, PubMed:16807956, PubMed:17127057, PubMed:17314045, PubMed:17652713,

PubMed:17705204, PubMed:19186056, PubMed:19206230, PubMed:7625839, PubMed:9054574). May stimulate the sodium/bicarbonate transporter activity of SLC4A4 that acts in pH homeostasis (PubMed:15563508). It is essential for acid overload removal from the retina and retina epithelium, and acid release in the choriocapillaris in the choroid (PubMed:15563508).

Cellular Location Cell membrane; Lipid-anchor, GPI-anchor

Tissue Location Expressed in the endothelium of the choriocapillaris in eyes (at protein level). Not expressed in the retinal epithelium at detectable levels.

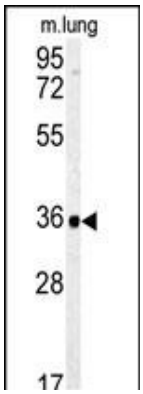
Background

CA4 is a large family of zinc metalloenzymes that catalyze the reversible hydration of carbon dioxide. They participate in a variety of biological processes, including respiration, calcification, acid-base balance, bone resorption, and the formation of aqueous humor, cerebrospinal fluid, saliva, and gastric acid. They show extensive diversity in tissue distribution and in their subcellular localization. This protein is a glycosylphosphatidyl-inositol-anchored membrane isozyme expressed on the luminal surfaces of pulmonary (and certain other) capillaries and proximal renal tubules. Its exact function is not known; however, the protein may have a role in inherited renal abnormalities of bicarbonate transport.

References

Okuyama T., Sato S.Proc. Natl. Acad. Sci. U.S.A. 89:1315-1319(1992) Okuyama T.Genomics 16:678-684(1993) Yang Z., Alvarez B.V.Hum. Mol. Genet. 14:255-265(2005) Okuyama T.Arch. Biochem. Biophys. 320:315-322(1995)

Images



Western blot analysis of CA4 Antibody (C-term) (Cat.#AP7479b) in mouse lung tissue lysates (35ug/lane). CA4 (arrow) was detected using the purified Pab.

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