

CAIV/Carbonic Anhydrase IV Rabbit pAb

Catalog # AP96861

Product Information

Application	WB
Primary Accession	Q64444
Other Accession	Q64444
Reactivity	Mouse
Predicted	Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	34351
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from mouse CAIV/Carbonic Anhydrase IV
Epitope Specificity	201-280/305
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the alpha-carbonic anhydrase family.
SUBUNIT	Interacts with SLC4A4.
DISEASE	The disease is caused by mutations affecting the gene represented in this entry. Defective acid overload removal from retina and retinal epithelium, due to mutant CA4, is responsible for photoreceptor degeneration, indicating that impaired pH homeostasis is the most likely cause underlying the RP17 phenotype. Disease description:A retinal dystrophy belonging to the group of pigmentary retinopathies. Retinitis pigmentosa is characterized by retinal pigment deposits visible on fundus examination and primary loss of rod photoreceptor cells followed by secondary loss of cone photoreceptors. Patients typically have night vision blindness and loss of midperipheral visual field. As their condition progresses, they lose their far peripheral visual field and eventually central vision as well.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Carbonic anhydrases (CAs) are 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 gene encodes 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, it may have a role in inherited renal abnormalities of bicarbonate transport. [provided by RefSeq, Jul 2008]

Additional Information

Gene ID	12351
Other Names	CAIV; Car4; RP17; Ca4; CAH4_HUMAN; Carbonate dehydratase IV; Carbonic anhydrase IV (CA-IV); 4.2.1.1; CAH4_MOUSE; carbonic anhydrase 4; retinitis pigmentosa 17 (autosomal dominant); carbonic anhydrase IV
Dilution	WB=1:500-2000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	Ca4
Synonyms	Car4
Function	Catalyzes the reversible hydration of carbon dioxide into bicarbonate and protons and thus is essential to maintaining intracellular and extracellular pH. May stimulate the sodium/bicarbonate transporter activity of SLC4A4 that acts in pH homeostasis. It is essential for acid overload removal from the retina and retina epithelium, and acid release in the choriocapillaris in the choroid.
Cellular Location	Cell membrane {ECO:0000250 UniProtKB:P22748}; Lipid-anchor, GPI-anchor {ECO:0000250 UniProtKB:P22748}

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