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Rabbit Anti-CAIV/Carbonic Anhydrase IV antibody

SL8722R

Product Name:	CAIV/Carbonic Anhydrase IV
Chinese Name:	碳酸酐酶4抗体
Alias:	CA IV; CA4; CAH4_HUMAN; CAIV; Car4; Carbonate dehydratase IV; Carbonic anhydrase 4; Carbonic dehydratase; Carbonic dehydratase IV; EC 4.2.1.1; Retinitis pigmentosa 17 (autosomal dominant); RP17.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,
Applications:	ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800ICC=1:100-500IF=1:100-500（Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	35kDa
Cellular localization:	The cell membrane
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human CAIV/Carbonic Anhydrase IV:81-150/312
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	Preservative: 15mM Sodium Azide, Constituents: 1% BSA, 0.01M PBS, pH 7.4
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. 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.
PubMed:	PubMed
Product Detail:	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]

Function:
Reversible hydration of carbon dioxide. 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.

Subunit:
Interacts with SLC4A4.

Subcellular Location:
Cell membrane; Lipid-anchor › GPI-anchor

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

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.

Similarity:
Belongs to the alpha-carbonic anhydrase family.

SWISS:
P22748

Gene ID:
762

Database links:

Entrez Gene: 762 Human

	Entrez Gene: 12351 Mouse Omim: 114760 Human SwissProt: P22748 Human SwissProt: Q64444 Mouse Unigene: 89485 Human Unigene: 1641 Mouse **Important Note:** This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.