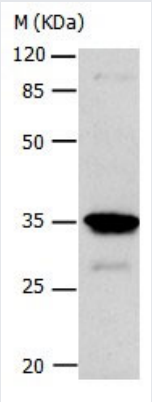
CA4 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	CA4, Polyclonal Antibody
Full Product Name	CA4 Antibody
Product Gene Name	anti-CA4 antibody
Product Synonym Names	Carbonic anhydrase 4, CAIV, Car4, RP17
Clonality	Polyclonal
Host	Rabbit
Species Reactivity	Human
Form/Format	Supplied at 0.8mg/mL in phosphate buffered saline (without Mg2+ and Ca2+), pH 7.3, 0.05% sodium azide and 50% glycerol.
Specificity	The antibody detects endogenous level of total CA4 protein.
Preparation and Storage	Store at -20 degree C/1 year
Molecular Weight	11,599 Da
OMIM	114760
Immunogen Type	Recombinant Protein
Immunogen Description	Fusion protein corresponding to a region derived from 19-284 amino acids of Human Carbonic anhydrase 4
Target Name	CA4
Product Categories/Family for anti-CA4 antibody	Total protein Ab
Applications Tested/Suitable for anti-CA4 antibody	ELISA (EIA), Western Blot (WB)
Application Notes for anti-CA4 antibody	ELISA: 1:1000-1:5000 Western blotting: 1:200-1:1000
Related Product Information for anti-CA4 antibody	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.
Other Notes	Small volumes of anti-CA4 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for CA4 purchase	MBS9409690 is an antibody targeting CA4. Also known as CA4 Antibody. Reactive in Human. Host: Rabbit.



Testing Data of anti-CA4 antibody
Gel: 10%SDS-PAGE Lysate: 30 ug Human fetal lung tissue lysate Primary antibody: 1/500 dilution Secondary antibody: Donkey anti Rabbit IgG - H&L (HRP) at 1/3000 dilution
Exposure time: 40 seconds

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CA4. It may not necessarily be applicable to this product.

NCBI GI #	34785515
NCBI GeneID	762
NCBI Accession #	BC057792
UniProt Secondary Accession #	Q6FHI7; B4DQA4
UniProt Related Accession #	P22748
NCBI Official Full Name	Homo sapiens carbonic anhydrase IV, mRNA
NCBI Official Synonym Full Names	carbonic anhydrase IV
NCBI Official Symbol	CA4
NCBI Official Synonym Symbols	CAIV; Car4; RP17
UniProt Protein Name	Carbonic anhydrase 4
UniProt Synonym Protein Names	Carbonate dehydratase IV; Carbonic anhydrase IV; CA-IV
Protein Family	Carbonic anhydrase
UniProt Gene Name	CA4
UniProt Synonym Gene Names	CA-IV
UniProt Entry Name	CAH4_HUMAN
NCBI Protein Information	carbonic anhydrase 4

UniProt Comments for CA4	CA4: 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. Defects in CA4 are the cause of retinitis pigmentosa type 17 (RP17). RP leads to degeneration of retinal photoreceptor cells. 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. RP17 inheritance is autosomal dominant. 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. Belongs to the alpha-carbonic anhydrase family. Protein type: Energy Metabolism - nitrogen; Membrane protein, GPI anchor; EC 4.2.1.1; Lyase Chromosomal Location of Human Ortholog: 17q23 Cellular Component: Golgi apparatus; cell surface; rough endoplasmic reticulum; sarcoplasmic reticulum; basolateral plasma membrane; brush border membrane; secretory granule membrane; ER-Golgi intermediate compartment; trans-Golgi network; anchored to external side of plasma membrane; membrane; perinuclear region of cytoplasm; apical plasma membrane; plasma membrane; sarcolemma Molecular Function: carbonate dehydratase activity; protein binding; zinc ion binding Biological Process: response to drug; response to steroid hormone stimulus; bicarbonate transport; organ development; one-carbon compound metabolic process Disease: Retinitis Pigmentosa 17
Research Articles on CA4	**1.** Carbonic anhydrase 4 is lost in papillary thyroid carcinoma but not thyroid nodules
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