

Rabbit Anti-Human Carbonic Anhydrase XIV Monoclonal Antibody

Cat. No. CAB11486RH **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Rabbit monoclonal antibody to human carbonic anhydrase XIV.
Species	Human
Source	Rabbit
Antigen Description	Carbonic anhydrases (CAs) are zinc-binding metalloenzymes that catalyze the reversible hydration of carbon dioxide to form HCO ₃ ⁻ and protons. Fifteen CA isoforms have been reported so far. CA I, CA II, CA III, CA VII, and CA XIII are cytosolic enzymes, whereas CA IV, CA IX, CA XII, CA XIV, and CA XV are membrane-associated isoforms. CA XIV is a polypeptide consisting of an extracellular N-terminal catalytic domain, a membrane-spanning segment and a short intracellular C-terminal segment with several potential phosphorylation sites. The CA XIV protein is expressed in the brain on plasma membranes of neuronal bodies and axons, in the kidney preferentially on the apical membranes of proximal tubules, and in the liver on the plasma membranes of hepatocytes. CA14, together with CA4, play important roles in the regulation of intracellular pH in hippocampal neurons by facilitating AE3-mediated Cl ⁻ -HCO ₃ ⁻ exchange.
Specificity	Human Carbonic Anhydrase XIV / CA14. No cross-reactivity in ELISA with Human CARPX, Human CA12, Mouse CA14.
Immunogen	Recombinant Human Carbonic Anhydrase XIV / CA14 Protein

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Isotype	Rabbit IgG
Clone	516
Applications	Western Blot; ELISA; Immunohistochemistry
Dilution	Immunochemistry : IHC-P: 2 - 8 µg/mL. Western blot: This antibody can be used at 1 - 2 µg/mL with the appropriate secondary reagents to detect Human CA14 in WB. Using a DAB detection system, the detection limit for Human CA14 is approximately 0.25 ng/lane under non-reducing conditions and reducing conditions. Direct ELISA: This antibody can be used at 0.1 - 0.2 µg/mL with the appropriate secondary reagents to detect Human CA14. The detection limit for Human CA14 is approximately 0.00245 ng/well.
Preparation	This antibody was obtained from a rabbit immunized with purified, human cell-derived, recombinant Human Carbonic Anhydrase XIV / CA14.
Format	0.2 µm filtered solution in PBS with 5% trehalose
Storage	This antibody can be stored at 2-8 °C for one month without detectable loss of activity. Antibody products are stable for twelve months from date of receipt when stored at -20 °C to -70 °C. Preservative-Free. Sodium azide is recommended to avoid contamination (final concentration 0.05%-0.1%). It is toxic to cells and should be disposed of properly. Avoid repeated freeze-thaw cycles.

GENE INFORMATION

Gene Name	CA14 carbonic anhydrase XIV [Homo sapiens]
Official Symbol	CA14

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Synonyms	CA14; carbonic anhydrase XIV; carbonic anhydrase 14; CA-XIV; carbonic dehydratase; carbonate dehydratase XIV; CAXiV;
Gene ID	23632
mRNA Refseq	NM_012113
Protein Refseq	NP_036245
MIM	604832
UniProt ID	Q9ULX7
Chromosome Location	1q21
Function	carbonate dehydratase activity; lyase activity; metal ion binding;
Immunochemical staining of human CA14 in human liver with rabbit monoclonal antibody . Positive staining was localized to membrane of hepatocyte. 	