

Rabbit Anti-Mouse Carbonic Anhydrase 14 Monoclonal Antibody

Cat. No. CAB11490RM Lot. No. (See product label)

SPECIFICATION

Product Overview Rabbit monoclonal antibody to mouse carbonic anhydrase 14.

Species Mouse

Source Rabbit

Antigen Description

Carbonic anhydrases (CAs) are a large family of zinc metalloenzymes that catalyze the reversible hydration of carbon dioxide to form HCO₃⁻ and protons. Since discovered in 1933, 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. They have different patterns of tissue-specific expression and play different physiologic roles. 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. CA14 is highly expressed in all parts of the central nervous system (CNS) with lower expression in adult liver, heart, small intestine, colon, kidney, urinary bladder, and skeletal muscle.

Specificity

Mouse Carbonic Anhydrase XIV / CA14. No cross-reactivity in ELISA with Human Carbonic Anhydrase XIV / CA14, Human Carbonic Anhydrase X / CA10, Mouse Carbonic Anhydrase IV / CA4, Mouse Carbonic Anhydrase XII / CA12, Human cell lysate (293 cell line).

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Immunogen	Recombinant Mouse Carbonic Anhydrase XIV / CA14 Protein
Isotype	Rabbit IgG
Clone	034
Applications	Western Blot; ELISA
Dilution	Western blot: This antibody can be used at 1 - 2 µg/mL with the appropriate secondary reagents to detect Mouse CA14 in WB. Using a DAB detection system, the detection limit for Mouse 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 Mouse CA14. The detection limit for Mouse CA14 is approximately 0.00245 ng/well.
Preparation	This antibody was obtained from a rabbit immunized with purified, human cell-derived, recombinant Mouse 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	Car14 carbonic anhydrase 14 [<i>Mus musculus</i>]
Official Symbol	Car14

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Synonyms	CAR14; carbonic anhydrase 14; CA XIV; CA-XIV; carbonic anhydrase XIV; carbonate dehydratase XIV; Ca14; AW536446;
Gene ID	23831
mRNA Refseq	NM_011797
Protein Refseq	NP_035927
Function	carbonate dehydratase activity; lyase activity; metal ion binding;

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