Mouse Carbonic Anhydrase XIV/CA14 Biotinylated Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: BAF2504

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Carbonic Anhydrase XIV/CA14 in Western blots. In Western blots, approximately 30% cross-reactivity with recombinant human (rh) CA14 is observed and less than 5% cross-reactivity with rhCA1, -2, -3, -6, -8, -10, -13 recombinant mouse CA4, -9, and -12 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Carbonic Anhydrase XIV/CA14 Ala16-Met290 Accession # Q9WVT6
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Mouse Carbonic Anhydrase XIV (Catalog # 2504-CA)

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Carbonic anhydrase (CA) catalyzes the reversible reaction of $CO_2 + H_2O = HCO_3^- + H^+$, which is fundamental to many processes such as respiration, renal tubular acidification and bone resorption (1). Topics in a CA meeting (6^{th} International Conference on the CAs, June 20-25, 2003, Slovakia) ranged from use of CAs as markers for tumor and hypoxia in clinic, as nutritional supplement in milk, and as a tool for CO_2 removal and mosquito control in industry. Mouse CA14 is a type I membrane enzyme highly expressed in the kidney and heart, followed by the skeletal muscle, brain, lung and liver (2). The deduced amino acid sequence of mouse CA14 consists of a signal peptide (residues 1 to 15), an ectodomain (residues 16 to 290), a transmembrane domain (residues 291 to 311) and a cytoplamic region (residues 32 to 337). rmCA14 corresponds to the ectodomain and has activity as described in Activity Assay Protocol.

References:

1. Hewett-Emmett, D. and R.E. Tashian (1996) Mol. Phylogenet. Evol. **5**:50.
2. Mori, K. *et al.* (1999) J. Biol. Chem. **274**:15701.

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