

DESCRIPTION

Species Reactivity	Human/Mouse/Rat
Specificity	Detects mouse Carbonic Anhydrase XIV/CA14 in direct ELISAs and Western blots. In direct ELISAs and Western blots, 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
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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.

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunoprecipitation	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Carbonic anhydrase (CA) catalyzes the reversible reaction of $\text{CO}_2 + \text{H}_2\text{O} = \text{HCO}_3^- + \text{H}^+$, which is fundamental to many processes such as respiration, renal tubular acidification and bone resorption (1). Topics in a CA meeting (6th 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 cytoplasmic region (residues 32 to 337). rmCA14 corresponds to the ectodomain and has activity as described in Activity Assay Protocol.

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