

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Carbonic Anhydrase XII/CA12 in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant human CA1, -2, -3, -4, -7, -8, -10, -11, -13 or -14 is observed.
Source	Monoclonal Mouse IgG ₁ Clone # 315602
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Carbonic Anhydrase XII/CA12 Ala25-Gln291 Accession # O43570
Conjugate	Alexa Fluor 750 Excitation Wavelength: 749 nm Emission Wavelength: 775 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.

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 the use of CAs as markers for tumor and hypoxia in the clinic, as a nutritional supplement in milk, and as a tool for CO_2 removal and mosquito control in industry. CA12 is a type I membrane enzyme highly expressed in colon, kidney, prostate, intestine and activated lymphocytes and moderately expressed in pancreas, ovary, and testis (2, 3). It is over-expressed in some renal cell cancers and in glaucoma (2, 4). Two alternatively spliced forms exist, which either contains or lacks a 11 amino acid segment just before the transmembrane domain (5). The secreted, purified recombinant human CA12 contains the residues that are common for both forms.

PRODUCT SPECIFIC NOTICES

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