

DESCRIPTION

Species Reactivity	Human/Mouse
Specificity	Detects human Carbonic Anhydrase II/CA2 in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant human (rh) CA-1, -3, -4, -5A, -5B, -6, -7, -8, or -9 is observed.
Source	Monoclonal Rat IgG _{2A} Clone # 322706
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human Carbonic Anhydrase II/CA2 Ser2-Lys260 Accession # P00918
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 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.
Immunohistochemistry	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 the 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 the clinic, as nutritional supplement in milk, and as a tool for CO_2 removal and mosquito control in industry. CA2 is a cytosolic enzyme with the highest activity among all known CAs. Mutations in the CA2 gene result in the CA II deficiency syndrome, an autosomal recessive disorder that produces osteopetrosis, renal tubular acidosis and cerebral calcification (2).

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