

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Carbonic Anhydrase III/CA3 in direct ELISAs and Western blots. In direct ELISAs, no cross-reactivity with recombinant human CA1, 2, 4, 5a, 5b, 6, 7, 8, or 9 is observed.
Source	Monoclonal Mouse IgG _{2A} Clone # 495018
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human Carbonic Anhydrase III/CA3 Ala2-Lys260 Accession # P07451
Conjugate	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 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 is a group of metalloproteases that catalyze 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). CA3 is an approximately 29 kDa cytosolic enzyme with a very low CA activity. It is expressed at low levels in human muscle during early development but increases rapidly during the last trimester to reach 50-60% of adult levels at birth (2). It is present at high levels in skeletal muscle and much lower levels in other tissues, such as cardiac and smooth muscle. The amino acid sequence of human CA3 is 99%, 90% and 92% identical to that of chimpanzee, dog and mouse/rat.

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