

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Carbonic Anhydrase I/CA1 in direct ELISAs and Western blots. In Western blots, 30% cross-reactivity with recombinant human (rh) CA2 is observed and no cross-reactivity with rhCA3, -4, -7, -8, -10, -11, -12, -13, or -14 is observed.
Source	Monoclonal Rat IgG _{2A} Clone # 363121
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human Carbonic Anhydrase I/CA1 Ala2-Phe261 Accession # P00915
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.

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). CA1 is a cytosolic enzyme with the highest levels in erythrocytes and is a very early marker for erythroid differentiation (2). The activity of CA1 can also be measured by its ability to catalyze the reaction $\text{CO}_2 + \text{H}_2\text{O} \rightarrow \text{HCO}_3^- + \text{H}^+$, using a published method (3).

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