Human/Mouse Carbonic Anhydrase VIII/CA8 Alexa Fluor® 700-conjugated Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF2187N
100 µg

DESCRIPTION

Species Reactivity	Human/Mouse
Specificity	Detects human Carbonic Anhydrase VIII/CA8 in direct ELISAs and Western blots. In direct ELISAs, approximately 5% cross-reactivity with recombinant human (rh) CA2 and rhCA3 is observed and less than 1% cross-reactivity with rhCA1, rhCA4, and rhCA
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant human Carbonic Anhydrase VIII/CA8 Ala2-Gln290 Accession # P35219
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 (CA) catalyzes the reversible reaction of $CO_2 + H_2O = HCO_3^- + H^+$, 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. CA8, also called CA-related protein (CARP), is a cytosolic protein without CA activity (i.e., the reversible hydration of CO_2) due to point mutations in the zinc-binding site (2). Nevertheless, it has esterase activity described in the Activity Assay Protocol. CA8 is expressed exclusively in Purkinje cells of the cerebellum, where it binds inositol 1,4,5-triphosphate receptor type 1 (3). CA8 overexpression in human colorectal cancer and non-small cell lung cancer indicates that it plays a role in the process of invasion in these types of malignancy (4, 5).

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