Human Carbonic Anhydrase IX/CA9 Alexa Fluor® 700-conjugated Antibody

Monoclonal Mouse IgG_{2A} Clone # 303123

Catalog Number: FAB2188N

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Carbonic Anhydrase IX (CA9) in direct ELISAs. In direct ELISAs, this antibody does not cross-react with recombinant mouse (rm) CA9 or with rhCA1, 2, 3, 4, 5A, 6, 7, 8, 10, 12, 13, or 14.
Source	Monoclonal Mouse IgG_{2A} Clone # 303123
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Carbonic Anhydrase IX Pro59-Asp414 Accession # Q16790
Conjugate	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *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.

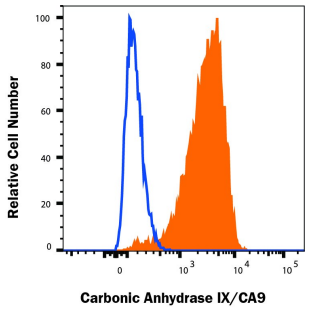
APPLICATIONS

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.*

	Recommended Concentration	Sample
Flow Cytometry	0.25-1 µg/10^6 cells	U-87 MG human glioblastoma/astrocytoma cell line

DATA

Flow Cytometry



Detection of Carbonic Anhydrase IX/CA9 in U-87 MG Human Cell Line by Flow Cytometry. U-87 MG human glioblastoma/astrocytoma cell line was stained with Mouse Anti-Human Carbonic Anhydrase IX/CA9 Alexa Fluor® 700-conjugated Monoclonal Antibody (Catalog # FAB2188N, filled histogram) or isotype control antibody (Catalog # IC003N, open histogram). View our protocol for Staining Membrane-associated Proteins.

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 (1-3). Topics in the CA meeting (6^{th} International Conference on the CAs, June 20-25, 2003; Slovakia) ranged from use of CAs as markers for tumor and hypoxia in clinic, as nutritional supplement in milk, and as a tool for CO_2 removal and mosquito control in industry. CA9, also known as membrane antigen MN and renal cell carcinoma (RCC)-associated antigen G250, is a transmembrane enzyme expressed primarily in carcinoma cells. It is one of the best markers for hypoxia and for RCC (4, 5). rhCA9 corresponds to the extracellular portion of human CA9.

References:

1. Pastorek, J. *et al.* (1994) Oncogene **9**:2877.
2. Opavsky, R. *et al.* (1996) Genomics **33**:480.
3. Hewett-Emmett, D. and R.E. Tashian (1996) Mol. Phylogenet. Evol. **5**:50.
4. Kaluzova, M. *et al.* (2004) Mol. Cell Biol. **24**:5757.
5. Mukouyama, H. *et al.* (2004) Clin. Cancer Res. **10**:1421.

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