**Human Carbonic Anhydrase IX/CA9**

**Fluorescein-conjugated Antibody**

**Monoclonal Mouse IgG\textsubscript{2A} Clone # 303123**

Catalog Number: FAB2188F

100 Tests

### 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\textsubscript{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** Fluorescein

Excitation Wavelength: 488 nm

Emission Wavelength: 515-545 nm (FITC)

**Formulation** Supplied 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.

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<th>Recommended Concentration</th>
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### 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 Fluorescein-conjugated Monoclonal Antibody (Catalog # FAB2188F, filled histogram) or isotype control antibody (Catalog # IC003F, 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 \( \text{CO}_2 + \text{H}_2\text{O} = \text{HCO}_3^- + \text{H}^+ \), which is fundamental to many processes such as respiration, renal tubular acidification and bone resorption (1-3). 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 clinic, as nutritional supplement in milk, and as a tool for CO\textsubscript{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:**