

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	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.
<b>Source</b>	Monoclonal Mouse IgG <sub>2A</sub> Clone # 303123
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human Carbonic Anhydrase IX Pro59-Asp414 Accession # Q16790
<b>Conjugate</b>	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
<b>Formulation</b>	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
<b>Flow Cytometry</b>	0.25-1 µg/10 <sup>6</sup> cells	HeLa human cervical epithelial carcinoma cell line

## PREPARATION AND STORAGE

<b>Shipping</b>	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<b>Protect from light. Do not freeze.</b> <ul style="list-style-type: none"> <li>12 months from date of receipt, 2 to 8 °C as supplied.</li> </ul>

## BACKGROUND

Carbonic Anhydrase (CA) catalyzes the reversible reaction of CO<sub>2</sub> + H<sub>2</sub>O = HCO<sub>3</sub><sup>-</sup> + H<sup>+</sup>, which is fundamental to many processes such as respiration, renal tubular acidification and bone resorption (1-3). Topics in the CA meeting (6<sup>th</sup> 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<sub>2</sub> 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. Mukoyama, H. *et al.* (2004) *Clin. Cancer Res.* **10**:1421.

## PRODUCT SPECIFIC NOTICES

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