

## DESCRIPTION

<b>Species Reactivity</b>	Mouse
<b>Specificity</b>	Detects mouse Carbonic Anhydrase IX/CA9 in direct ELISAs and Western blots. In direct ELISAs, approximately 20% cross-reactivity with recombinant human (rh) CA9 is observed, 5% cross-reactivity with recombinant mouse (rm) CA14 is observed, and less than 1% cross-reactivity with rhCA1, -2, -3, -8, -10, -13, rmCA4, and -12 is observed.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant mouse Carbonic Anhydrase IX/CA9 Gln32-Asp390 Accession # Q8VHB5
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

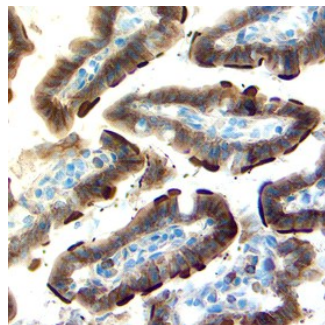
## APPLICATIONS

**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>Western Blot</b>	0.1 µg/mL	Recombinant Mouse Carbonic Anhydrase IX (Catalog # 2344-CA)
<b>Immunohistochemistry</b>	5-15 µg/mL	See Below
<b>Immunoprecipitation</b>	25 µg/mL	Conditioned cell culture medium spiked with Recombinant Mouse Carbonic Anhydrase IX (Catalog # 2344-CA), see our available <a href="#">Western blot detection antibodies</a>

## DATA

### Immunohistochemistry



**Carbonic Anhydrase IX in Mouse Colon.**  
Carbonic Anhydrase IX was detected in perfusion fixed frozen sections of mouse colon using Goat Anti-Mouse Carbonic Anhydrase IX Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2344) at 1.7 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific labeling was localized to the brush border of epithelial cells in villi. View our protocol for [Chromogenic IHC Staining of Frozen Tissue Sections](#).

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.2 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## 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). Topics in a CA meeting (6<sup>th</sup> International Conference on the CAs, June 20-25, 2003, in 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. Carbonic Anhydrase IX (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 (2, 3). Recombinant mouse CA9 corresponds to the extracellular portion of mouse CA9.

### References:

1. Hewett-Emmett, D. and R.E. Tashian (1996) *Mol. Phylogenet. Evol.* **5**:50.
2. Kaluzova, M. *et al.* (2004) *Mol. Cell Biol.* **24**:5757.
3. Mukoyama, H. *et al.* (2004) *Clin. Cancer Res.* **10**:1421.