

**CA9 Antibody**  
**Purified Mouse Monoclonal Antibody**  
**Catalog # AO1846a**

**Specification**

**CA9 Antibody - Product Information**

Application	E, WB, FC
Primary Accession	<a href="#">Q16790</a>
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Calculated MW	49.7kDa KDa

**Description**

Carbonic anhydrases (CAs) are a large family of zinc metalloenzymes that catalyze the reversible hydration of carbon dioxide. They participate in a variety of biological processes, including respiration, calcification, acid-base balance, bone resorption, and the formation of aqueous humor, cerebrospinal fluid, saliva, and gastric acid. They show extensive diversity in tissue distribution and in their subcellular localization. CA IX is a transmembrane protein and the only tumor-associated carbonic anhydrase isoenzyme known. It is expressed in all clear-cell renal cell carcinoma, but is not detected in normal kidney or most other normal tissues. It may be involved in cell proliferation and transformation. This gene was mapped to 17q21.2 by fluorescence in situ hybridization, however, radiation hybrid mapping localized it to 9p13-p12.

**Immunogen**

Purified recombinant fragment of human CA9 (AA: 37-186) expressed in E. Coli.

**Formulation**

Purified antibody in PBS with 0.05% sodium azide

**CA9 Antibody - Additional Information**

**Gene ID** 768

**Other Names**

Carbonic anhydrase 9, 4.2.1.1, Carbonate dehydratase IX, Carbonic anhydrase IX, CA-IX, CAIX, Membrane antigen MN, P54/58N, Renal cell carcinoma-associated antigen G250, RCC-associated antigen G250, pMW1, CA9, G250, MN

**Dilution**

E~~1/10000  
WB~~1/500 - 1/2000  
FC~~1/200 - 1/400

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

CA9 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## CA9 Antibody - Protein Information

**Name** CA9

**Synonyms** G250, MN

### Function

Catalyzes the interconversion between carbon dioxide and water and the dissociated ions of carbonic acid (i.e. bicarbonate and hydrogen ions).

### Cellular Location

Nucleus. Nucleus, nucleolus. Cell membrane; Single-pass type I membrane protein. Cell projection, microvillus membrane; Single-pass type I membrane protein. Note=Found on the surface microvilli and in the nucleus, particularly in nucleolus

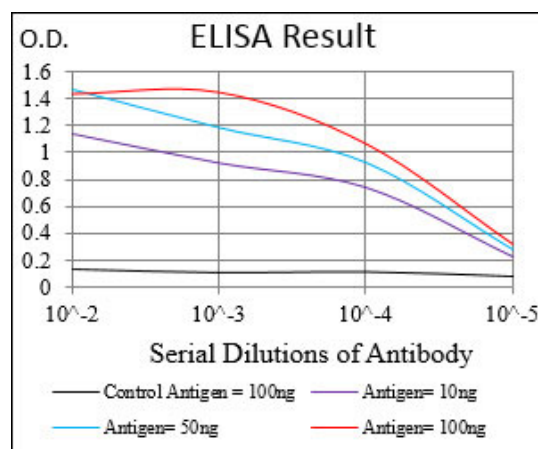
### Tissue Location

Expressed primarily in carcinoma cells lines. Expression is restricted to very few normal tissues and the most abundant expression is found in the epithelial cells of gastric mucosa

## CA9 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)



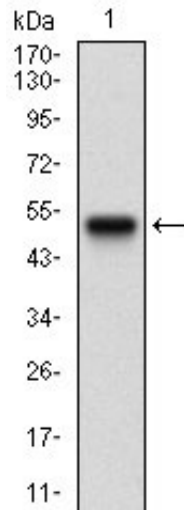


Figure 1: Western blot analysis using CA9 mAb against human CA9 recombinant protein. (Expected MW is 42 kDa)

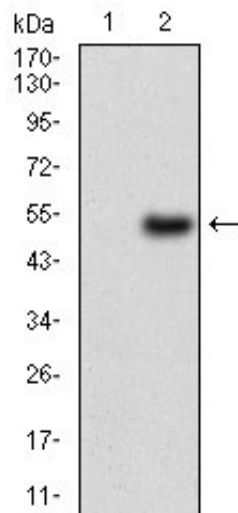


Figure 2: Western blot analysis using CA9 mAb against HEK293 (1) and CA9 (AA: 37-186)-hIgGFc transfected HEK293 (2) cell lysate.

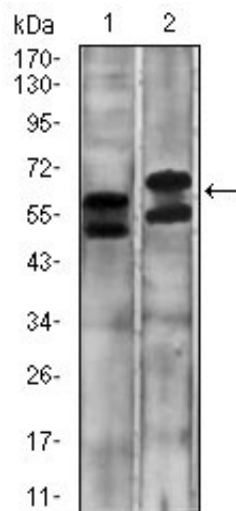


Figure 3: Western blot analysis using CA9 mouse mAb against A431 (1) and SW620 (2) cell lysate.

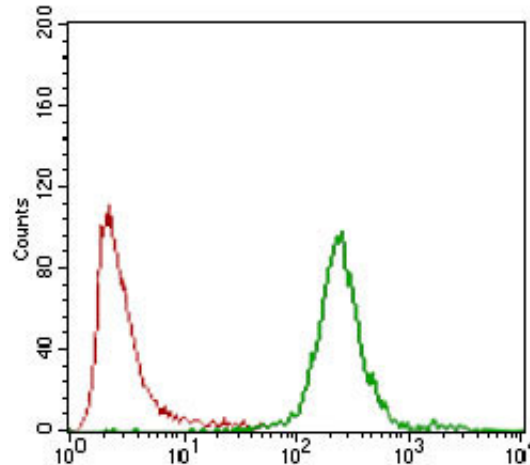


Figure 4: Flow cytometric analysis of NTERA-2 cells using CA9 mouse mAb (green) and negative control (red).

### CA9 Antibody - Background

Carbonic anhydrases (CAs) are a large family of zinc metalloenzymes that catalyze the reversible hydration of carbon dioxide. They participate in a variety of biological processes, including respiration, calcification, acid-base balance, bone resorption, and the formation of aqueous humor, cerebrospinal fluid, saliva, and gastric acid. They show extensive diversity in tissue distribution and in their subcellular localization. CA IX is a transmembrane protein and the only tumor-associated carbonic anhydrase isoenzyme known. It is expressed in all clear-cell renal cell carcinoma, but is not detected in normal kidney or most other normal tissues. It may be involved in cell proliferation and transformation. This gene was mapped to 17q21.2 by fluorescence in situ hybridization, however, radiation hybrid mapping localized it to 9p13-p12. ;

### CA9 Antibody - References

1. Breast Cancer Res Treat. 2012 Nov;136(1):67-75.
2. Histol Histopathol. 2011 Oct;26(10):1279-86.