

Anti-ca2 Picoband Antibody
Catalog # ABO12674**Specification****Anti-ca2 Picoband Antibody - Product Information**

Application	WB, IHC
Primary Accession	P00918
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

Description

Rabbit IgG polyclonal antibody for Carbonic anhydrase 2(CA2) detection. Tested with WB, IHC-P in Human;Mouse;Rat.

Reconstitution

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-ca2 Picoband Antibody - Additional Information

Gene ID 760

Other Names

Carbonic anhydrase 2, 4.2.1.1, Carbonate dehydratase II, Carbonic anhydrase C, CAC, Carbonic anhydrase II, CA-II, CA2

Calculated MW

29246 MW KDa

Application Details

Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, By Heat

Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat

Subcellular Localization

Cytoplasm . Cell membrane . Colocalized with SLC26A6 at the surface of the cell membrane in order to form a bicarbonate transport metabolon. Displaced from the cytosolic surface of the cell membrane by PKC in phorbol myristate acetate (PMA)-induced cells.

Protein Name

Carbonic anhydrase 2

Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.

Immunogen

E.coli-derived human CA2 recombinant protein (Position: S2-K260). Human CA2 shares 81.1% and 80.7% amino acid (aa) sequence identity with mouse and rat CA2, respectively.

Purification

Immunogen affinity purified.

Cross Reactivity

No cross reactivity with other proteins

Storage

At -20°C for one year. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.

Anti-ca2 Picoband Antibody - Protein Information

Name CA2

Function

Catalyzes the reversible hydration of carbon dioxide (PubMed:11327835, PubMed:11802772, PubMed:11831900, PubMed:12056894, PubMed:12171926, PubMed:1336460, PubMed:14736236, PubMed:15300855, PubMed:15453828, PubMed:15667203, PubMed:15865431, PubMed:16106378, PubMed:16214338, PubMed:16290146, PubMed:16686544, PubMed:16759856, PubMed:16807956, PubMed:17127057, PubMed:17251017, PubMed:17314045, PubMed:17330962, PubMed:17346964, PubMed:17540563, PubMed:17588751, PubMed:17705204, PubMed:18024029, PubMed:18162396, PubMed:18266323, PubMed:18374572, PubMed:18481843, PubMed:18618712, PubMed:18640037, PubMed:18942852, PubMed:1909891, PubMed:1910042, PubMed:19170619, PubMed:19186056, PubMed:19206230, PubMed:19520834, PubMed:<a

[19778001](http://www.uniprot.org/citations/19778001), PubMed: [7761440](http://www.uniprot.org/citations/7761440), PubMed: [7901850](http://www.uniprot.org/citations/7901850), PubMed: [8218160](http://www.uniprot.org/citations/8218160), PubMed: [8262987](http://www.uniprot.org/citations/8262987), PubMed: [8399159](http://www.uniprot.org/citations/8399159), PubMed: [8451242](http://www.uniprot.org/citations/8451242), PubMed: [8485129](http://www.uniprot.org/citations/8485129), PubMed: [8639494](http://www.uniprot.org/citations/8639494), PubMed: [9265618](http://www.uniprot.org/citations/9265618), PubMed: [9398308](http://www.uniprot.org/citations/9398308)). Can also hydrate cyanamide to urea (PubMed: [10550681](http://www.uniprot.org/citations/10550681) target="_blank">11015219). Stimulates the chloride-bicarbonate exchange activity of SLC26A6 (PubMed: [15990874](http://www.uniprot.org/citations/15990874)). Essential for bone resorption and osteoclast differentiation (PubMed: [15300855](http://www.uniprot.org/citations/15300855)). Involved in the regulation of fluid secretion into the anterior chamber of the eye. Contributes to intracellular pH regulation in the duodenal upper villous epithelium during proton-coupled peptide absorption.

Cellular Location

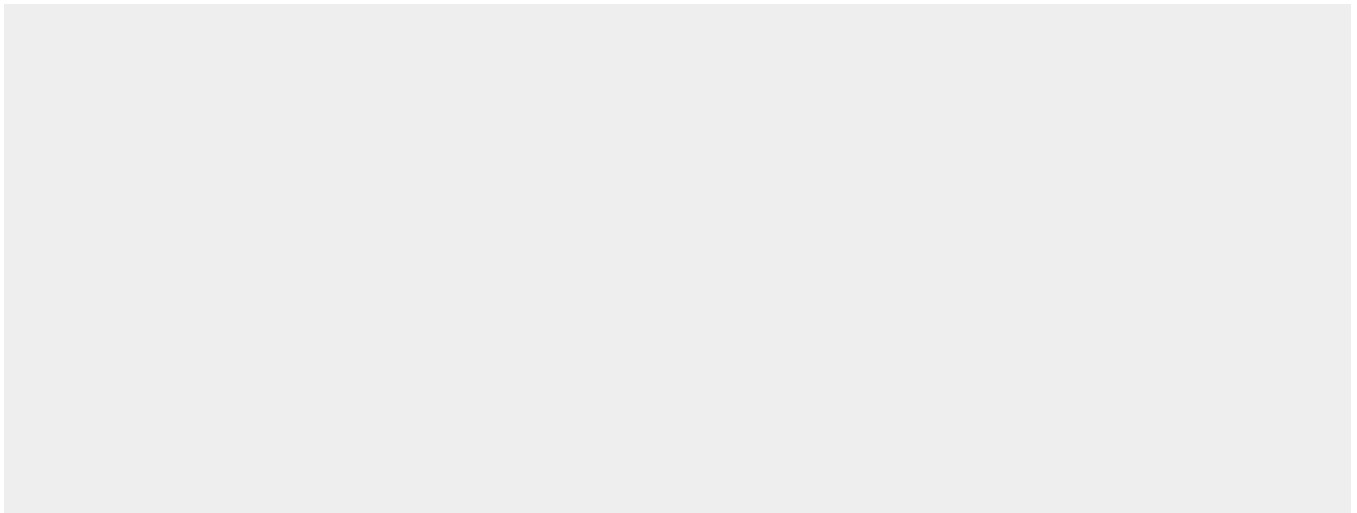
Cytoplasm. Cell membrane. Note=Colocalized with SLC26A6 at the surface of the cell membrane in order to form a bicarbonate transport metabolon. Displaced from the cytosolic surface of the cell membrane by PKC in phorbol myristate acetate (PMA)-induced cells

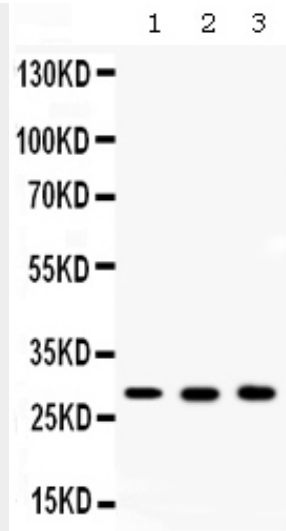
Anti-ca2 Picoband Antibody - Protocols

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

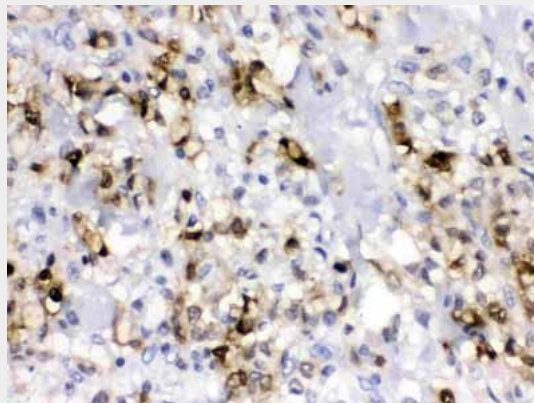
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Anti-ca2 Picoband Antibody - Images

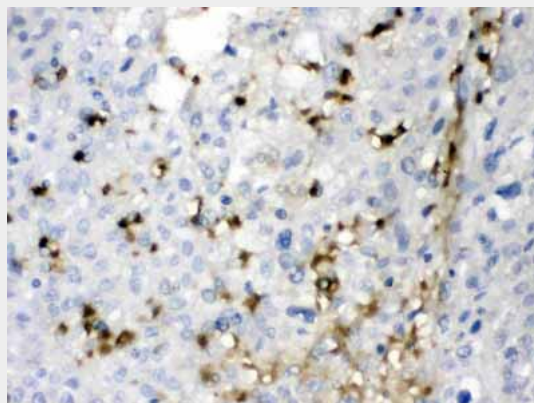




Western blot analysis of CA2 expression in rat ovary extract (lane 1), mouse liver extract (lane 2) and MCF-7 whole cell lysates (lane 3). CA2 at 29KD was detected using rabbit anti- CA2 Antigen Affinity purified polyclonal antibody (Catalog # ABO12674) at 0.5 µg/mL. The blot was developed using chemiluminescence (ECL) method .



CA2 was detected in paraffin-embedded sections of human gastric cancer tissues using rabbit anti- CA2 Antigen Affinity purified polyclonal antibody (Catalog # ABO12674) at 1 µg/mL. The immunohistochemical section was developed using SABC method .



CA2 was detected in paraffin-embedded sections of human liver cancer tissues using rabbit anti-CA2 Antigen Affinity purified polyclonal antibody (Catalog # ABO12674) at 1 µg/mL. The immunohistochemical section was developed using SABC method .

Anti-ca2 Picoband Antibody - Background

CA2 is a cytosolic enzyme with the highest activity among all known CAs. The carbonic anhydrases (ACs) form a family of enzymes that catalyze the rapid interconversion of carbon dioxide and water to bicarbonate and protons (or vice versa), a reversible reaction that occurs relatively slowly in the absence of a catalyst. Mutations in the CA2 gene result in the CA II deficiency syndrome, an autosomal recessive disorder that produces osteopetrosis, renal tubular acidosis and cerebral calcification. This gene is mapped to 8q22.