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# Anti-ca2 Picoband Antibody

Catalog # ABO12674

## Product Information

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| **Application** | WB, IHC-P |
| **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. |

## Additional Information

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| **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 |
| **Application Details** | Immunohistochemistry(Paraffin-embedded Section), 0.5-1 □g/ml, Human, By Heat<br><br>Western blot, 0.1-0.5 □g/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. |
| **Source** | Eukaryota |
| **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 |

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| **Storage** | At -20˚C for one year. After r˚Constitution, 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. |

## Protein Information

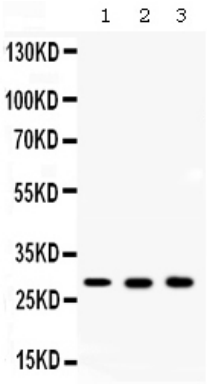
| | |
|---|---|
| **Name** | CA2 |
| **Function** | Catalyzes the reversible hydration of carbon dioxide (PubMed: 11327835, PubMed:11802772, PubMed:11831900, PubMed:12056894, PubMed:12171926, PubMed:1336460, PubMed:14736236, PubMed:15300855, PubMed:15453828, PubMed:15667203, PubMed:15865431, PubMed:16106378, 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:18640037, PubMed:18942852, PubMed:1909891, PubMed:1910042, PubMed:19170619, PubMed:19186056, PubMed:19206230, PubMed:19520834, PubMed:19778001, PubMed:7761440, PubMed:7901850, PubMed:8218160, PubMed:8262987, PubMed:8399159, PubMed:8451242, PubMed:8485129, PubMed:8639494, PubMed:9265618, PubMed:9398308, PubMed:4994926). Can also hydrate cyanamide to urea (PubMed:10550681, PubMed:11015219). Stimulates the chloride-bicarbonate exchange activity of SLC26A6 (PubMed:15990874). Essential for bone resorption and osteoclast differentiation (PubMed: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 |

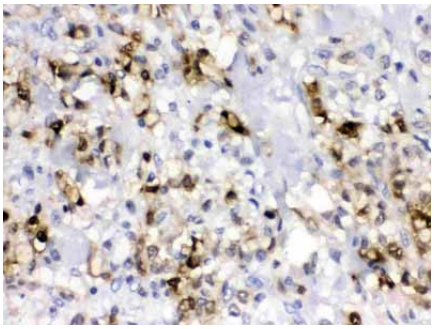
## Background

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.

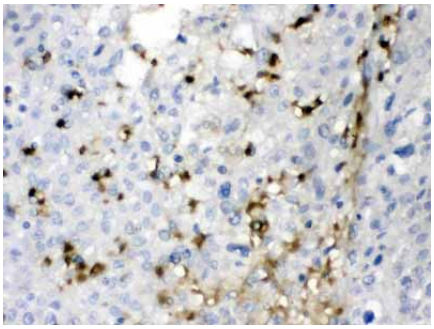
## Images

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 ??g/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 □¼g/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 □¼g/mL. The immunohistochemical section was developed using SABC method .

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