

**Anti-CARBONIC ANHYDRASE II (RABBIT) Antibody Peroxidase Conjugated**  
**Carbonic Anhydrase II Antibody Peroxidase Conjugated**  
**Catalog # ASR4515****Specification****Anti-CARBONIC ANHYDRASE II (RABBIT) Antibody Peroxidase Conjugated - Product Information**

Host	Rabbit
Conjugate	Peroxidase (Horseradish)
Target Species	Human
Reactivity	Human
Clonality	Polyclonal
Application	WB, IHC, E, I, LCI
Application Note	Anti-Carbonic Anhydrase II Peroxidase Antibody has been tested by Western blot and suitable to be assayed against 1.0 ug of Carbonic Anhydrase II [Human Erythrocytes] in a standard capture ELISA using ABTS (2,2'-azino-bis-[3-ethylbenthiazoline-6-sulfonic acid]) code # ABTS-100 as a substrate for 30 minutes at room temperature. A working dilution of 1:1,000 to 1:6,000 of the reconstitution concentration is suggested for this product.
Physical State	Lyophilized
Buffer	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Immunogen	Carbonic Anhydrase II [Human Erythrocytes]
Reconstitution Volume	100 µL
Reconstitution Buffer	Restore with deionized water (or equivalent)
Stabilizer	10 mg/mL Bovine Serum Albumin (BSA) - Immunoglobulin and Protease free
Preservative	0.01% (w/v) Gentamicin Sulfate. Do NOT add Sodium Azide!

**Anti-CARBONIC ANHYDRASE II (RABBIT) Antibody Peroxidase Conjugated - Additional Information****Gene ID 760****Other Names**  
760**Purity**

Carbonic anhydrase II is an IgG fraction antibody purified from monospecific antiserum by a multi-step process which includes delipidation, salt fractionation and ion exchange chromatography followed by extensive dialysis against the buffer stated above. Assay by

immuno-electrophoresis resulted in a single precipitin arc against anti-Peroxidase, anti-Rabbit Serum as well as purified and partially purified Carbonic Anhydrase II [Human Erythrocytes]. Cross reactivity against Carbonic Anhydrase II from other sources may occur but have not been specifically determined.

### Storage Condition

Store vial at 4° C prior to restoration. For extended storage aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

### Precautions Note

This product is for research use only and is not intended for therapeutic or diagnostic applications.

## Anti-CARBONIC ANHYDRASE II (RABBIT) Antibody Peroxidase Conjugated - Protein Information

Name CA2

### Function

Catalyzes the reversible hydration of carbon dioxide (PubMed:<a href="http://www.uniprot.org/citations/11327835" target="\_blank">11327835</a>, PubMed:<a href="http://www.uniprot.org/citations/11802772" target="\_blank">11802772</a>, PubMed:<a href="http://www.uniprot.org/citations/11831900" target="\_blank">11831900</a>, PubMed:<a href="http://www.uniprot.org/citations/12056894" target="\_blank">12056894</a>, PubMed:<a href="http://www.uniprot.org/citations/12171926" target="\_blank">12171926</a>, PubMed:<a href="http://www.uniprot.org/citations/1336460" target="\_blank">1336460</a>, PubMed:<a href="http://www.uniprot.org/citations/14736236" target="\_blank">14736236</a>, PubMed:<a href="http://www.uniprot.org/citations/15300855" target="\_blank">15300855</a>, PubMed:<a href="http://www.uniprot.org/citations/15453828" target="\_blank">15453828</a>, PubMed:<a href="http://www.uniprot.org/citations/15667203" target="\_blank">15667203</a>, PubMed:<a href="http://www.uniprot.org/citations/15865431" target="\_blank">15865431</a>, PubMed:<a href="http://www.uniprot.org/citations/16106378" target="\_blank">16106378</a>, PubMed:<a href="http://www.uniprot.org/citations/16214338" target="\_blank">16214338</a>, PubMed:<a href="http://www.uniprot.org/citations/16290146" target="\_blank">16290146</a>, PubMed:<a href="http://www.uniprot.org/citations/16686544" target="\_blank">16686544</a>, PubMed:<a href="http://www.uniprot.org/citations/16759856" target="\_blank">16759856</a>, PubMed:<a href="http://www.uniprot.org/citations/16807956" target="\_blank">16807956</a>, PubMed:<a href="http://www.uniprot.org/citations/17127057" target="\_blank">17127057</a>, PubMed:<a href="http://www.uniprot.org/citations/17251017" target="\_blank">17251017</a>, PubMed:<a href="http://www.uniprot.org/citations/17314045" target="\_blank">17314045</a>, PubMed:<a href="http://www.uniprot.org/citations/17330962" target="\_blank">17330962</a>, PubMed:<a href="http://www.uniprot.org/citations/17346964" target="\_blank">17346964</a>, PubMed:<a href="http://www.uniprot.org/citations/17540563" target="\_blank">17540563</a>, PubMed:<a href="http://www.uniprot.org/citations/17588751" target="\_blank">17588751</a>, PubMed:<a href="http://www.uniprot.org/citations/17705204" target="\_blank">17705204</a>, PubMed:<a href="http://www.uniprot.org/citations/18024029" target="\_blank">18024029</a>, PubMed:<a href="http://www.uniprot.org/citations/18162396" target="\_blank">18162396</a>, PubMed:<a href="http://www.uniprot.org/citations/18266323" target="\_blank">18266323</a>, PubMed:<a href="http://www.uniprot.org/citations/18374572" target="\_blank">18374572</a>, PubMed:<a href="http://www.uniprot.org/citations/18481843" target="\_blank">18481843</a>, PubMed:<a href="http://www.uniprot.org/citations/18618712" target="\_blank">18618712</a>, PubMed:<a href="http://www.uniprot.org/citations/18640037" target="\_blank">18640037</a>, PubMed:<a href="http://www.uniprot.org/citations/18942852" target="\_blank">18942852</a>, PubMed:<a href="http://www.uniprot.org/citations/1909891" target="\_blank">1909891</a>, PubMed:<a

[1910042](http://www.uniprot.org/citations/1910042), PubMed: [19170619](http://www.uniprot.org/citations/19170619), PubMed: [19186056](http://www.uniprot.org/citations/19186056), PubMed: [19206230](http://www.uniprot.org/citations/19206230), PubMed: [19520834](http://www.uniprot.org/citations/19520834), PubMed: [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), PubMed: [11015219](http://www.uniprot.org/citations/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

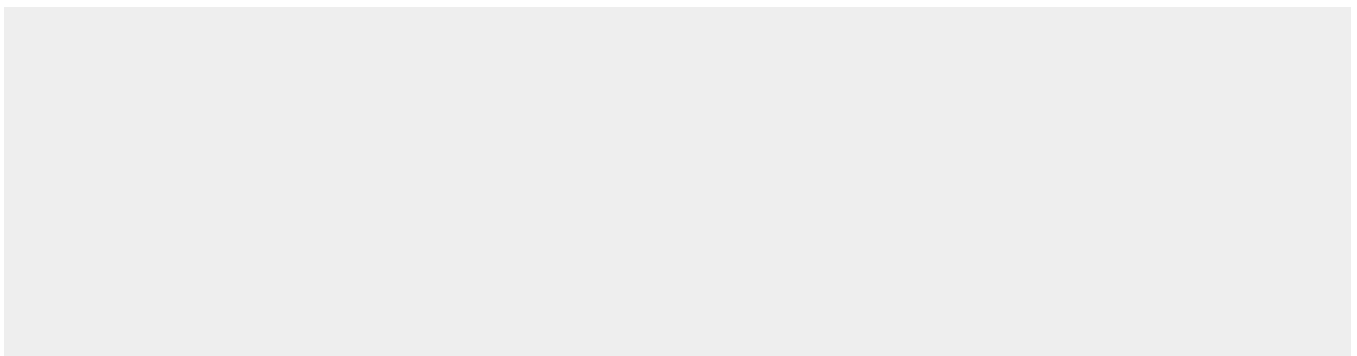
Cytoplasm. Cell membrane. Note=Colocalized with SLC26A6 at the surface of the cell membrane in order to form a bicarbonate transport metabolon. Displaced from the cytosolic surface of the cell membrane by PKC in phorbol myristate acetate (PMA)-induced cells

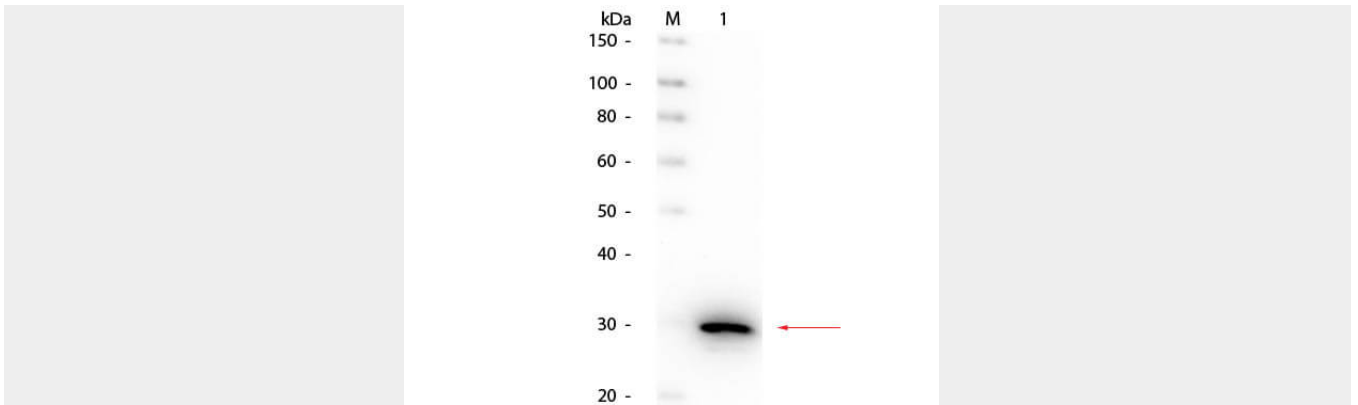
#### Anti-CARBONIC ANHYDRASE II (RABBIT) Antibody Peroxidase Conjugated - Protocols

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-CARBONIC ANHYDRASE II (RABBIT) Antibody Peroxidase Conjugated - Images





Western Blot of Rabbit anti-Carbonic Anhydrase II Antibody Peroxidase Conjugated. Lane 1: Carbonic Anhydrase II. Load: 50 ng per lane. Primary antibody: Rabbit anti-Carbonic Anhydrase II Antibody Peroxidase Conjugated at 1:1,000 overnight at 4°C. Secondary antibody: n/a. Block: MB-070 for 30 minutes at RT. Predicted/Observed size: 29 kDa, 29 kDa for Carbonic Anhydrase II.

#### **Anti-CARBONIC ANHYDRASE II (RABBIT) Antibody Peroxidase Conjugated - Background**

Carbonic anhydrase II (CA2), is one of fourteen forms of human  $\alpha$  carbonic anhydrases. Carbonic anhydrase catalyzes reversible hydration of carbon dioxide. Defects in this enzyme are associated with osteopetrosis and renal tubular acidosis. Carbonic anhydrase II has been shown to interact with Band 3 and Sodium-hydrogen antiporter 1.