

**Datasheet for 200-401-136-0100****Carbonic Anhydrase II Antibody****Overview**

|                      |                                                                 |
|----------------------|-----------------------------------------------------------------|
| <b>Description:</b>  | Anti-Carbonic Anhydrase II (RABBIT) Antibody - 200-401-136-0100 |
| <b>Item No.:</b>     | 200-401-136-0100                                                |
| <b>Size:</b>         | 100 µg                                                          |
| <b>Applications:</b> | ELISA, IHC, WB, IF, Other                                       |
| <b>Reactivity:</b>   | Human, Mouse                                                    |
| <b>Host Species:</b> | Rabbit                                                          |

**Product Details**

|                      |                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Background:</b>   | Carbonic Anhydrase II Antibody detects Carbonic Anhydrase II. Carbonic Anhydrase II is essential for bone resorption and osteoclast differentiation by similarity. It can hydrate cyanamide to urea and is involved in the regulation of fluid secretion into the anterior chamber of the eye. Anti-Carbonic Anhydrase II Antibody is ideal for investigators involved in Cell Signaling, Neuroscience, Signal Transduction research. |
| <b>Synonyms:</b>     | rabbit anti-Carbonic Anhydrase II Antibody, Carbonate dehydratase II antibody, Carbonic anhydrase 2 antibody, Carbonic anhydrase B antibody, Carbonic anhydrase C antibody, Carbonic anhydrase II antibody, Carbonic dehydratase antibody, CAC, CA-II                                                                                                                                                                                 |
| <b>Host Species:</b> | Rabbit                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Clonality:</b>    | Polyclonal                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Format:</b>       | IgG                                                                                                                                                                                                                                                                                                                                                                                                                                   |

**Target Details**

|                        |                                                                                                                      |
|------------------------|----------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name:</b>      | CA2                                                                                                                  |
| <b>Reactivity:</b>     | Human, Mouse                                                                                                         |
| <b>Immunogen Type:</b> | Native Protein                                                                                                       |
| <b>Immunogen:</b>      | Carbonic Anhydrase II Antibody was produced by repeated immunizations with human erythrocytes Carbonic Anhydrase II. |

**Purity/Specificity:** Anti-Carbonic Anhydrase II Antibody 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 immunoelectrophoresis resulted in a single precipitin arc against anti-Rabbit Serum as well as purified and partially purified Carbonic Anhydrase II [Human Erythrocytes]. Cross reactivity against Carbonic Anhydrase II from other tissues and species may occur but have not been specifically determined.

**Relevant Links:**

- [UniProtKB - P00918](#)
- [NCBI - NP\\_000058.1](#)
- [GeneID - 760](#)

## Application Details

|                                |                                                                                                                                                                                                           |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Tested Applications:</b>    | ELISA, IHC, WB                                                                                                                                                                                            |
| <b>Suggested Applications:</b> | IF, Other (Based on references)                                                                                                                                                                           |
| <b>Application Note:</b>       | Carbonic Anhydrase II Antibody has been tested by ELISA, western blot, and immunohistochemistry. Expect ~29.2kDa. Researchers should determine optimal titers for applications that are not stated below. |
| <b>Assay Dilutions:</b>        | All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.                                                                                                           |
| <b>ELISA:</b>                  | 1:165,000                                                                                                                                                                                                 |
| <b>IHC:</b>                    | User Optimized                                                                                                                                                                                            |
| <b>WB:</b>                     | 1:2000 to 1:10,000                                                                                                                                                                                        |

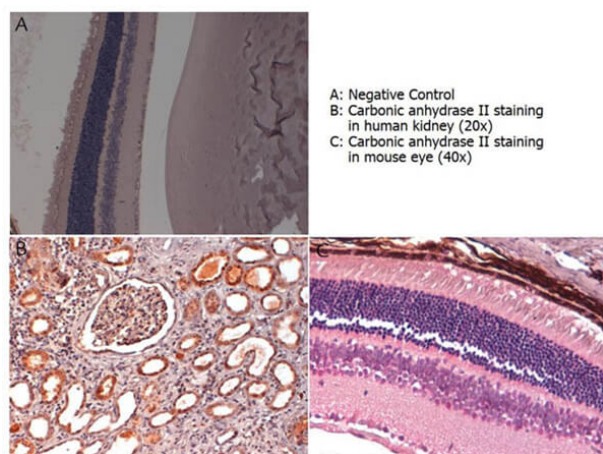
## Formulation

|                               |                                                            |
|-------------------------------|------------------------------------------------------------|
| <b>Physical State:</b>        | Lyophilized                                                |
| <b>Concentration:</b>         | 1.1mg/mL by UV absorbance at 280 nm                        |
| <b>Buffer:</b>                | 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2 |
| <b>Preservative:</b>          | 0.01% (w/v) Sodium Azide                                   |
| <b>Stabilizer:</b>            | None                                                       |
| <b>Reconstitution Volume:</b> | 100 µL                                                     |
| <b>Reconstitution Buffer:</b> | Restore with deionized water (or equivalent)               |

## Shipping & Handling

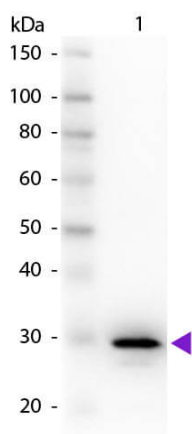
|                     |                                                                                                                                                                                                                                                                                                                                                 |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Shipping Condition: | Ambient                                                                                                                                                                                                                                                                                                                                         |
| 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. |
| Expiration:         | Expiration date is one (1) year from date of receipt.                                                                                                                                                                                                                                                                                           |

## Images



### Immunohistochemistry

Immunohistochemistry with anti-carbonic anhydrase II antibody showing carbonic anhydrase II staining in nucleus and cytoplasm of proximal and distal tubules, bowman's capsule and glomerular podocytes of human kidney (B) and in basal cells of retina of a mouse eye (C). Formalin fixed/paraffin embedded sections were subjected to heat induced epitope retrieval (HIER) at pH 6.2 and then incubated with rabbit anti-carbonic anhydrase II antibody at 4.0 µg/ml for 60 minutes. The reaction was developed using either MACH 1 universal HRP polymer detection (human kidney) or MACH 4 universal AP polymer detection system (mouse eye) and visualized with 3'3-diamino-benzidine substrate (DAB) or WARP RED.



### Western Blot

Western Blot of Rabbit Anti-Carbonic Anhydrase II primary antibody. Lane 1: Carbonic Anhydrase II. Load: 50 ng per lane. Primary antibody: Carbonic Anhydrase II primary antibody at 1:1,000 overnight at 4°C. Secondary antibody: Peroxidase goat anti-rabbit secondary antibody (p/n 611-103-122) at 1:40,000 for 30 min at RT. Blocking: (p/n MB-070) for 30 min at RT. Predicted/Observed size: 29 kDa, 29 kDa for Carbonic Anhydrase II. Other band(s): None.

## References

- Okamoto K et al. Immunohistochemical and electron microscopic characterization of brush cells of the rat cecum. *Med Mol Morphol.* (2008)
- Yasukawa Z et al. Identification of an inflammation-inducible serum protein recognized by anti-disialic acid antibodies as carbonic anhydrase II. *J Biochem.* (2007)

## Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.