

Datasheet for 200-4157S

Carbonic Anhydrase II Antibody

Overview

Description:	Anti-Carbonic Anhydrase II (RABBIT) Antibody - 200-4157S
Item No.:	200-4157S
Size:	25 µL
Applications:	IHC, WB, IF, Other
Reactivity:	Bovine
Host Species:	Rabbit

Product Details

Background:	Carbonic Anhydrase II Antibody is specific for carbonic anhydrase II. Carbonic anhydrases (or carbonate dehydratases) are a family of metalloenzymes that catalyze the rapid interconversion of carbon dioxide and water to bicarbonate and Hydrogen (or vice versa). This reversible reaction occurs slowly in the absence of the carbonic anhydrase catalyst. The active site of most carbonic anhydrases contains a zinc ion cofactor. One of the functions of the enzyme in animals is to interconvert carbon dioxide and bicarbonate to maintain acid-base balance in blood and other tissues, and to help transport carbon dioxide out of tissues.
Synonyms:	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
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	CA2
Reactivity:	Bovine
Immunogen Type:	Native Protein
Immunogen:	Carbonic Anhydrase II [Bovine Erythrocytes]

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 [Bovine Erythrocytes]. Cross reactivity against Carbonic Anhydrase II from other tissues and species may occur but have not been specifically determined.

Relevant Links:

- [UniProtKB - P00921](#)
- [NCBI - NP_848667.1](#)
- [GenelD - 280740](#)

Application Details

Tested Applications: IHC, WB

Suggested Applications: IF, Other (Based on references)

Application Note: Anti-Carbonic Anhydrase II Antibody has been tested by Western blot and immunohistochemistry. This product is suitable to be assayed against 1.0 µg of Carbonic Anhydrase II [Bovine Erythrocytes] in a standard ELISA using Peroxidase conjugated Affinity Purified anti-Rabbit IgG [H&L] (Goat) [code #611-1302] and TMBE [code # TMBE-1000] as a substrate for 30 minutes at room temperature.

Assay Dilutions: All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.

ELISA: 1:20,000 - 1:100,000

WB: 1:2,000 - 1:10,000

Formulation

Physical State: Liquid (sterile filtered)

Concentration: 1.0 mg/ml by UV absorbance at 280 nm

Buffer: 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2

Preservative: 0.01% (w/v) Sodium Azide

Stabilizer: None

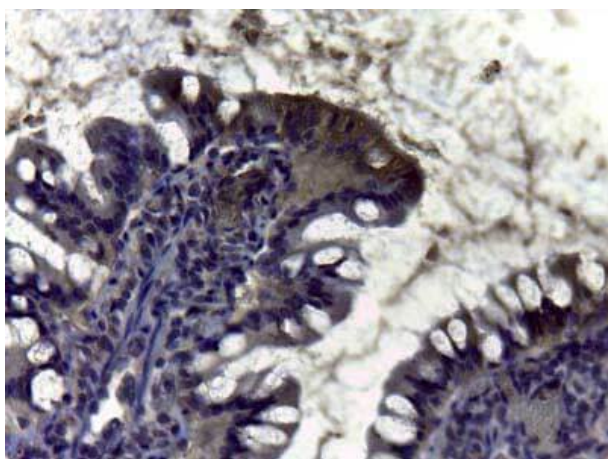
Shipping & Handling

Shipping Condition: Dry Ice

Storage Condition: Store vial at -20° C or below prior to opening. This vial contains a relatively low volume of reagent (25 µL). To minimize loss of volume dilute 1:10 by adding 225 µL of the buffer stated above directly to the vial. Recap, mix thoroughly and briefly centrifuge to collect the volume at the bottom of the vial. Use this intermediate dilution when calculating final dilutions as recommended below. Store the vial at -20°C or below after dilution. Avoid cycles of freezing and thawing.

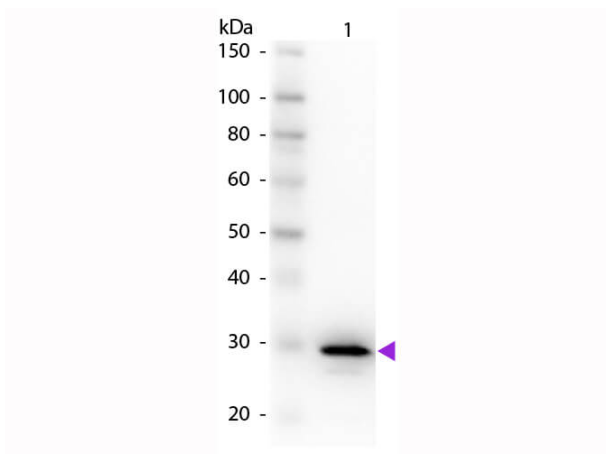
Expiration: Expiration date is one (1) year from date of receipt.

Images



Immunohistochemistry

Immunohistochemistry of Rabbit anti Carbonic Anhydrase II antibody Tissue: intestine Staining: diffuse positivity of enzyme Carbonic Anhydrase II in brush border of villus



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 rabbit secondary antibody (p/n 611-103-122) at 1:40,000 for 30 min at RT. Block: (p/n MB-070) for 30 min at RT. Predicted/Observed size: 28 kDa, 28 kDa for Alkaline Phosphatase.

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.