Datasheet for 200-401-136

Carbonic Anhydrase II Antibody

Overview

Description:	Anti-Carbonic Anhydrase II (RABBIT) Antibody (BULK ORDER) - 200-401-136
Item No.:	200-401-136
Size:	50 mg
Applications:	ELISA, IHC, WB, IF, Other
Reactivity:	Human, Mouse
Host Species:	Rabbit

Product Details

Background:	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.
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:	Human, Mouse
Immunogen Type:	Native Protein
Immunogen:	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:	• NCBI - NP_000058.1 • UniProtKB - P00918 • GeneID - 760

Application Details

Tested Applications:	ELISA, IHC, WB
Suggested Applications:	IF, Other (Based on references)
Application Note:	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.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:165,000
IHC:	User Optimized
WB:	1:2000 to 1:10,000

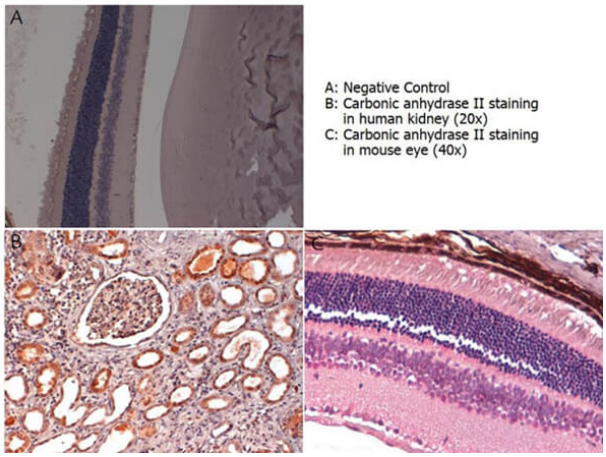
Formulation

Physical State:	Lyophilized
Concentration:	11.0 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
Reconstitution Volume:	5.0 mL
Reconstitution Buffer:	Restore with deionized water (or equivalent)

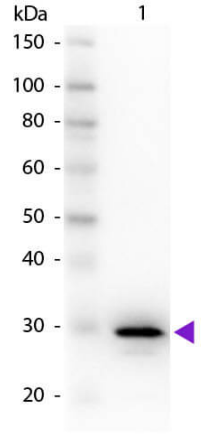
Shipping & Handling

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

- Wu M et al. Single-cell analysis of the human pancreas in type 2 diabetes using multi-spectral imaging mass cytometry. *Cell Rep.* (2021)
- Wang YJ et al. Multiplexed In Situ Imaging Mass Cytometry Analysis of the Human Endocrine Pancreas and Immune System in Type 1 Diabetes. *Cell Metab.* (2019)
- López-Arribillaga E et al. Manic Fringe deficiency imposes Jagged1 addiction to intestinal tumor cells. *Nat Commun.* (2018)
- Okamoto K et al. Immunohistochemical and electron microscopic characterization of brush cells of the rat cecum. *Med Mol Morphol.* (2008)
- Kujala M et al. Expression of ion transport-associated proteins in human efferent and epididymal ducts. *Reproduction.* (2007)
- 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

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