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Datasheet for 100-4157

Carbonic Anhydrase II Antibody

Overview

Description:	Anti-Carbonic Anhydrase II (RABBIT) Antibody - 100-4157
Item No.:	100-4157
Size:	2 mL
Applications:	IF
Reactivity:	Bovine
Host Species:	Rabbit

Product Details

Background:	Carbonic Anhydrase 2 is essential for bone resorption and osteoclast differentiation. It reverses hydration of carbon dioxide and can hydrate cyanamide to urea. It is involved in the regulation of fluid secretion into the anterior chamber of the eye. Carbonic Anhydrase II contributes to intracellular pH regulation in the duodenal upper villous epithelium during proton-coupled peptide absorption. It stimulates the chloride-bicarbonate exchange activity of SLC26A6. it is used for target of drugs used in treatments against glaucoma disorder and breast cancer.
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
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	Antiserum

Target Details

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

Purity/Specificity:	This product was prepared from monospecific antiserum by a delipidation and defibrination. Assay by immunoelectrophoresis resulted in a single precipitin arc against anti-rabbit serum, 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 • GeneID - 280740

Application Details

Suggested Applications:	IF (Based on references)
Application Note:	This product has been assayed against 1.0 ug 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 (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 1:3,000 to 1:14,000 of the reconstitution concentration is suggested for this product.
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

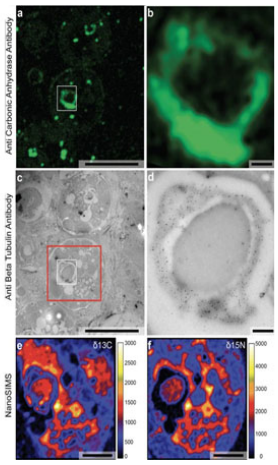
Physical State:	Lyophilized
Concentration:	85 mg/mL by Refractometry
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None
Reconstitution Volume:	2.0 mL
Reconstitution Buffer:	Restore with deionized water (or equivalent)

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



Immunofluorescence Microscopy
The correlative workflow combining immuno-fluorescence microscopy and immuno-electron microscopy with NanoSIMS imaging using Anti-Carbonic Anhydrase II Antibody.
The cryo section (ca. 100 nm thick) was imaged after simultaneous immunolocalization of carbonic anhydrase with anti-Alexa-associated secondary antibodies (a and b) and β-tubulin observed in TEM by 10 nm gold particles associated to the secondary antibody (c and d). The fluorescence microscope images (a and b; zoom in a) and the TEM micrographs (c and d; zoom in c) exhibit identical areas of the same thin section. e and f are NanoSIMS images showing the 13C and 15N distributions in the interior of a dinoflagellate symbiont. The area imaged is indicated by a red square in c. Scale bars: a and c: 5 µm; b and d: 500 nm; e and f: 2 µm. Fig 4. PMID: 32647198.

References

- Loussert-Fonta C et al. Correlation of fluorescence microscopy, electron microscopy, and NanoSIMS stable isotope imaging on a single tissue section. *Commun Biol.* (2020)

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