

Product Datasheet

Carbonic Anhydrase II/CA2 Antibody - BSA Free NB600-919-100ug

Unit Size: 100 ug

Store lyophilized antibody at 4C. Aliquot reconstituted liquid and store at -20C. Avoid freeze-thaw cycles.

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NB600-919-100ug

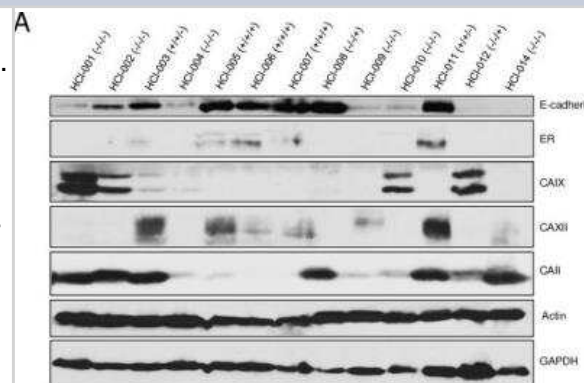
Carbonic Anhydrase II/CA2 Antibody - BSA Free

Product Information	
Unit Size	100 ug
Concentration	LYOPH mg/ml
Storage	Store lyophilized antibody at 4C. Aliquot reconstituted liquid and store at -20C. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.01% Sodium Azide
Reconstitution Instructions	Reconstitute with 100 ul deionized water (or equivalent)
Isotype	IgG
Purity	Multi-step
Buffer	Lyophilized from 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Product Description	
Description	<p>This 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]</p> <p>Store vial at 4C prior to restoration. For extended storage aliquot contents and freeze at -20C 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 4C as an undiluted liquid. Dilute only prior to immediate use.</p>
Host	Rabbit
Gene ID	760
Gene Symbol	CA2
Species	Human, Mouse
Reactivity Notes	Cross reactivity against Carbonic Anhydrase II/CA2 from other tissues and species may occur but have not been specifically determined.
Specificity/Sensitivity	Cross reactivity against Carbonic Anhydrase II/CA2 from other tissues and species may occur but have not been specifically determined.
Immunogen	Carbonic Anhydrase II/CA2 Antibody was produced by repeated immunizations with human erythrocytes Carbonic Anhydrase II/CA2. (Uniprot: P00918)
Product Application Details	
Applications	Western Blot, Simple Western, ELISA, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin
Recommended Dilutions	Western Blot 1:2000-1:10000, Simple Western 1:400, ELISA 1:165000, Immunohistochemistry 1:10 - 1:500, Immunohistochemistry-Paraffin 1:10 - 1:500, Immunohistochemistry-Frozen 1:10 - 1:500
Application Notes	<p>This product has been tested by ELISA, western blot, and immunohistochemistry. Expect ~29.2kDa. Researchers should determine optimal titers for applications that are not stated below.</p> <p>Use in Immunohistochemistry-Frozen reported in scientific literature (PMID</p>

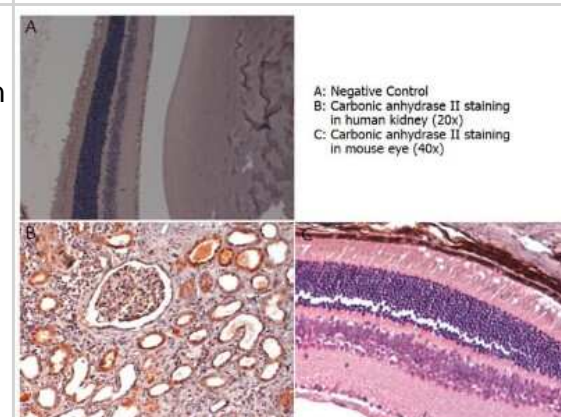


Images

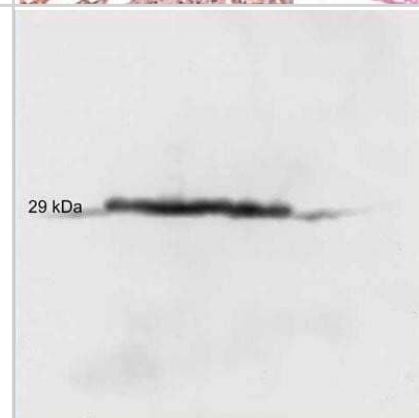
Western Blot: Carbonic Anhydrase II/CA2 Antibody [NB600-919] -
Differential expression of CAIX and CAXII in patient-derived tumor grafts.
 Frozen tissue samples from PDX tumors were homogenized in RIPA buffer containing protease inhibitor. Western blots were probed with antibodies for CAIX, CAXII, CAII, ER, E-cadherin, actin, and GAPDH. Image collected and cropped by CiteAb from the following publication (<https://dx.plos.org/10.1371/journal.pone.0199476>) licensed under a CC-BY license.



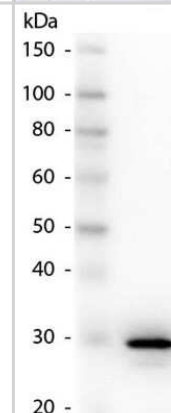
Immunohistochemistry: Carbonic Anhydrase II/CA2 Antibody [NB600-919] -
 Staining in nucleus and cytoplasm of proximal and distal tubules, bowman's capsule and glomerular podocytes of human kidney (B) and in basal cells of retina of a mouse eye (C). Formalin fixed/paraffin embedded sections were subjected to heat induced epitope retrieval (HIER) at pH 6.2 and then incubated with rabbit anti-carbonic anhydrase II antibody at 4.0 ug/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.



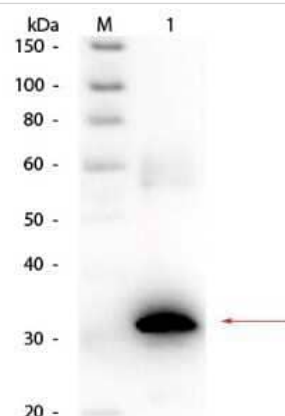
Western Blot: Carbonic Anhydrase II/CA2 Antibody [NB600-919] -
Detection of Carbonic Anhydrase II in mouse embryonic whole cell lysate. Image provided via product review by verified customer.



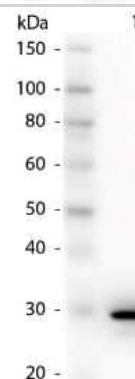
Western Blot: Carbonic Anhydrase II/CA2 Antibody [NB600-919] -
analysis of Carbonic Anhydrase II protein (loading amount: 50 ng) using rabbit anti-Carbonic Anhydrase II antibody (NB600-919) at a dilution of 1:1000, incubation - overnight at 4C.



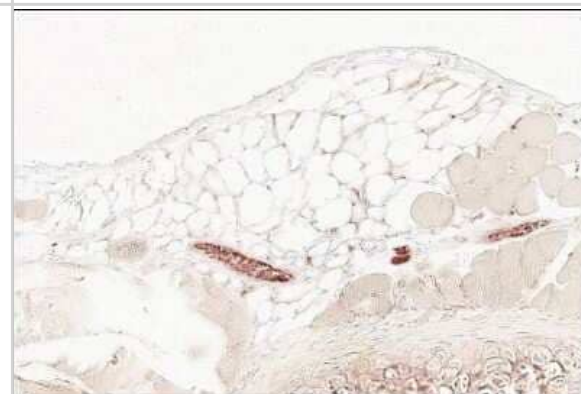
Western Blot: Carbonic Anhydrase II/CA2 Antibody [NB600-919] - Analysis using the Biotin conjugate of NB600-919. Detection of Lane 1: Carbonic Anhydrase II. Load: 50 ng per lane. Primary antibody: Rabbit anti-Carbonic Anhydrase II Antibody Biotin Conjugated at 1:1,000 overnight at 4C. Secondary antibody: HRP streptav



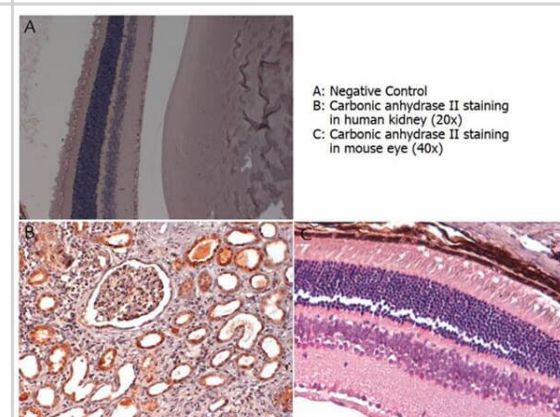
Western Blot: Carbonic Anhydrase II/CA2 Antibody [NB600-919] - Lane 1: Carbonic Anhydrase II. Lane 2: None. Load: 50 ng per lane. Primary antibody: Carbonic Anhydrase II primary antibody at 1:1,000 overnight at 4C. Secondary antibody: Peroxidase rabbit secondary antibody at 1:40,000 for 30 min at RT. Blocking: incubated with blocking buffer for 30 min at RT. Predicted/Observed size: 29 kDa, 29 kDa for Carbonic Anhydrase II. Other band(s): None.



Immunohistochemistry-Paraffin: Carbonic Anhydrase II/CA2 Antibody [NB600-919] - Localization of CAII in mouse peritoneum. Image from verified customer review.



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 ug/ml for 60 minutes. The reaction was developed using either MACH 1 universal HRP polymer detection system (human kidney) or MACH 4 universal AP polymer detection system (mouse eye) and visualized with 3'3-diamino-benzidine substrate (DAB) or WARP RED.



Publications

Kuijper EC, Overzier M, Suidgeest E et al. Antisense oligonucleotide-mediated disruption of HTT caspase-6 cleavage site ameliorates the phenotype of YAC128 Huntington disease mice *Neurobiology of disease* 2023-11-29 [PMID: 38040383] (WB, Mouse)

Details:

Dilution 1:1000

Mboge, M Y, Chen, Z Et al. A non-catalytic function of carbonic anhydrase IX contributes to the glycolytic phenotype and pH regulation in human breast cancer cells. *Biochem J* 2019-05-28 [PMID: 31072911] (WB, Human)

Dai, S Y & Yang, D. A Visible and Near-Infrared Light Activatable Diazocoumarin Probe for Fluorogenic Protein Labeling in Living Cells. *J Am Chem Soc* 2020-10-07 [PMID: 32870680] (WB, IF/IHC, Mouse, Human)

Chen Z, Ai L, Mboge MY et al. Differential expression and function of CAIX and CAXII in breast cancer: A comparison between tumorgraft models and cells. *PLoS ONE*. 2018-07-02 [PMID: 29965974] (WB, Mouse)

Yin J, Tse CM, Avula LR et al. Molecular Basis and Differentiation-Associated Alterations of Anion Secretion in Human Duodenal Enteroid Monolayers *Cell Mol Gastroenterol Hepatol* 2018-02-09 [PMID: 29930980] (WB, Human)

Chen Z, Ai L, Mboge MY et al. UFH-001 cells: A novel triple negative, CAIX-positive, human breast cancer model system. *Cancer Biol. Ther.* 2018-03-21 [PMID: 29561695] (WB, Human)

Cicchetti F, Lacroix S, Cisbani G et al. Mutant huntingtin is present in neuronal grafts in Huntington's disease patients. *Ann. Neurol.* 2014-05-06 [PMID: 24798518] (IHC-Fr, Human)

Tu C, FosterL, Alvarado A et al. Role of Zinc in Catalytic Activity of Carbonic Anhydrase IX *Archives of Biochemistry and Biophysics* 2012-03-12 [PMID: 22465027] (WB, Human)

Shiah, H-S, Gao, W, Baker, D C, Cheng, Y-C. (2006) Inhibition of cell growth nuclear factor- κ B activity in pancreatic cancer cell lines by a tylophorine analogue, DCB-3503, 5, 2484-2493. [PMID: 17041092]

Li Y, Tu C, Wang H et al. Catalysis and pH control by membrane-associated carbonic anhydrase IX in MDA-MB-231 breast cancer cells. *J Biol Chem.* 2011-03-17 [PMID: 21454639]

Li X, Alvarez B, Casey JR et al. Carbonic anhydrase II binds to enhances activity of the Na⁺/H⁺ exchanger. *J Biol Chem*;277(39):36085-91. 2002-09-27 [PMID: 12138085]





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Products Related to NB600-919-100ug

NBL1-08615	Carbonic Anhydrase II/CA2 Overexpression Lysate
HAF008	Goat anti-Rabbit IgG Secondary Antibody [HRP]
NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
NBP2-24891	Rabbit IgG Isotype Control

Limitations

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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