

Rabbit CA2 Polyclonal Antibody | anti-CA2 antibody

Anti-ca2 Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA46638	Rabbit	Human, Mouse, Rat No cross reactivity with other proteins.	Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

CA2; Polyclonal Antibody; Anti-ca2 Antibody; 4.2.1.1; CAC; CAH2; CAII; CA-II; Carbonate dehydratase II; Carbonic anhydrase 2; Carbonic anhydrase B; Carbonic anhydrase C; Carbonic Anhydrase II; Carbonic dehydratase; P00918; carbonic anhydrase II; anti-CA2 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat No cross reactivity with other proteins.
Clonality	Polyclonal
Isotype	IgG
Purity/Purification	Immunogen affinity purified.
Form/Format	Lyophilized
Sequence Length	260
Applicable Applications for anti-CA2 antibody	IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	E Coli-derived human CA2 recombinant protein (Position: S2-K260). Human CA2 shares 81.1% and 80.7% amino acid (aa) sequence identity with mouse and rat CA2, respectively.
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.
Preparation and Storage	At -20 degree C for one year. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for a longer time. Avoid repeated freezing and thawing.

IMAGES



FCM/FACS (Flow Cytometry)

Figure 5. Flow Cytometry analysis of SW480 cells using anti-CA2 antibody (AAA46638). Overlay histogram showing SW480 cells stained with AAA46638 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-CA2 Antibody (AAA46638, 1ug/1x10⁶ cells) for 30 min at 20 degree C. DyLight[®]488 conjugated goat anti-rabbit IgG (5-10ug/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x10⁶) used under the same conditions. Unlabelled sample (Red line) was also used as a control.



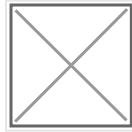
FCM/FACS (Flow Cytometry)

Figure 4. Flow Cytometry analysis of HT-29 cells using anti-CA2 antibody (AAA46638). Overlay histogram showing HT-29 cells stained with AAA46638 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-CA2 Antibody (AAA46638, 1ug/1x10⁶ cells) for 30 min at 20 degree C. DyLight[®]488 conjugated goat anti-rabbit IgG (5-10ug/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x10⁶) used under the same conditions. Unlabelled sample (Red line) was also used as a control.



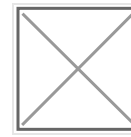
IHC (Immunohistochemisry)

Figure 3. IHC analysis of CA2 using anti- CA2 antibody (AAA46638).CA2 was detected in paraffin-embedded section of human liver cancer tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-CA2 Antibody (AAA46638) overnight at 4 degree C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.



WB (Western Blot)

Figure 1. Western blot analysis of CA2 using anti- CA2 antibody (AAA46638).Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.Lane 1: rat ovary tissue lysates,Lane 2: mouse liver tissue lysates,Lane 3: MCF-7 whole cell lysates.After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti- CA2 antigen affinity purified polyclonal antibody at 0.5ug/mL overnight at 4 degree C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for CA2 at approximately 29KD. The expected band size for CA2 is at 29KD,



IHC (Immunohiostchemistry)

Figure 2. IHC analysis of CA2 using anti- CA2 antibody (AAA46638).CA2 was detected in paraffin-embedded section of human gastric cancer tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-CA2 Antibody (AAA46638) overnight at 4 degree C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.

ADDITIONAL INFORMATION

Related Product Information for anti-CA2 antibody	Rabbit IgG polyclonal antibody for Carbonic anhydrase 2 (CA2) detection. Background: CA2 is a cytosolic enzyme with the highest activity among all known CAs. The carbonic anhydrases (ACs) form a family of enzymes that catalyze the rapid interconversion of carbon dioxide and water to bicarbonate and protons (or vice versa), a reversible reaction that occurs relatively slowly in the absence of a catalyst. Mutations in the CA2 gene result in the CA II deficiency syndrome, an autosomal recessive disorder that produces osteopetrosis, renal tubular acidosis and cerebral calcification. This gene is mapped to 8q22.
References	1. Aramaki, S., Yoshida, I., Yoshino, M., Kondo, M., Sato, Y., Noda, K., Jo, R., Okue, A., Sai, N., Yamashita, F. Carbonic anhydrase II deficiency in three unrelated Japanese patients. J. Inherit. Metab. Dis. 16: 982-990, 1993. 2. Laitala, T., Vaananen, H. K. Inhibition of bone resorption in vitro by antisense RNA and DNA molecules targeted against carbonic anhydrase II or two subunits of vacuolar H(+)-ATPase. J. Clin. Invest. 93: 2311-2318, 1994. 3. Venta, P. J., Welty, R. J., Johnson, T. M., Sly, W. S., Tashian, R. E. Carbonic anhydrase II deficiency syndrome in a Belgian family is caused by a point mutation at an invariant histidine residue (107his-to-tyr): complete structure of the normal human CA II gene. Am. J. Hum. Genet. 49: 1082-1090, 1991.

NCBI AND UNIPROT INFORMATION

NCBI GI #	4557395
NCBI GeneID	760
NCBI Accession #	NP_000058.1
NCBI GenBank Nucleotide #	NM_000067.2
UniProt Accession #	P00918 ; Q6FI12 ; Q96ET9 ; B2R7G8
Molecular Weight	29,246 Da
NCBI Official Full Name	carbonic anhydrase 2 isoform 1
NCBI Official Synonym Full Names	carbonic anhydrase 2

NCBI Official Symbol	CA2
NCBI Official Synonym Symbols	CAC; CAII; Car2; CA-II; HEL-76; HEL-S-282
NCBI Protein Information	carbonic anhydrase 2
UniProt Protein Name	Carbonic anhydrase 2
UniProt Gene Name	CA2
UniProt Synonym Gene Names	CAC; CA-II
UniProt Entry Name	CAH2_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/ca2-antibody-immunohistochemistry-western-blot-elisa/46638>