10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

CA1 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP12645a

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	P00915
Other Accession	NP_001122301.1, NP_001122302.1
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB18358
Calculated MW	28870
Antigen Region	60-90

Additional Information

Gene ID	759
Other Names	Carbonic anhydrase 1, Carbonate dehydratase I, Carbonic anhydrase B, CAB, Carbonic anhydrase I, CA-I, CA1
Target/Specificity	This CA1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 60-90 amino acids from the N-terminal region of human CA1.
Dilution	WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	CA1 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CA1
Function	Catalyzes the reversible hydration of carbon dioxide (PubMed: 10550681, PubMed:16506782, PubMed:16686544, PubMed:16807956,

PubMed:17127057, PubMed:17314045, PubMed:17407288, PubMed:18618712, PubMed:19186056, PubMed:19206230). Can hydrate cyanamide to urea (PubMed:10550681).

Cellular Location Cytoplasm {ECO:0000250|UniProtKB:B0BNN3}.

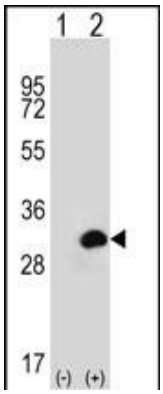
Background

Carbonic anhydrases (CAs) are a large family of zinc metalloenzymes that catalyze the reversible hydration of carbon dioxide. They participate in a variety of biological processes, including respiration, calcification, acid-base balance, bone resorption, and the formation of aqueous humor, cerebrospinal fluid, saliva, and gastric acid. They show extensive diversity in tissue distribution and in their subcellular localization. CA1 is closely linked to CA2 and CA3 genes on chromosome 8, and it encodes a cytosolic protein which is found at the highest level in erythrocytes. Variants of this gene have been described in some populations. Multiple alternatively spliced variants, encoding the same protein, have been identified. Transcript variants of CA1 utilizing alternative polyA_sites have been described in literature.

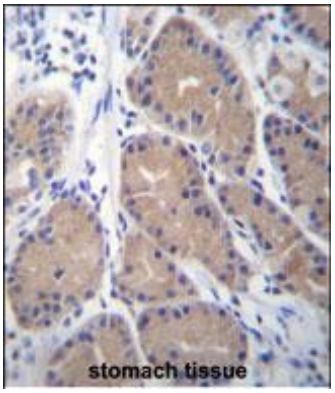
References

Abhary, S., et al. Mol. Vis. 15, 1179-1184 (2009) :
Gambhir, K.K., et al. Biochem. Genet. 45 (5-6), 431-439 (2007) :
Temperini, C., et al. Bioorg. Med. Chem. Lett. 17(8):2210-2215(2007)
Temperini, C., et al. Bioorg. Med. Chem. Lett. 16(19):5152-5156(2006)
Dawson, S.J., et al. J. Infect. 24(3):317-320(1992)

Images

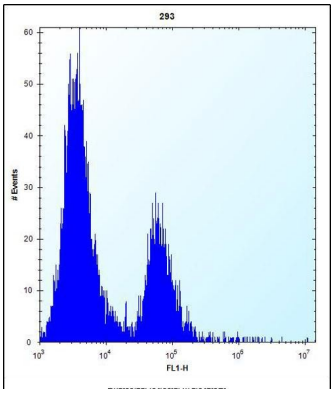


Western blot analysis of CA1 (arrow) using rabbit polyclonal CA1 Antibody (N-term) (Cat. #AP12645a). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected (Lane 2) with the CA1 gene.



CA1 Antibody (N-term) (Cat. #AP12645a)immunohistochemistry analysis in formalin fixed and paraffin embedded human stomach tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of CA1 Antibody (N-term) for immunohistochemistry. Clinical relevance has not been evaluated.

CA1 Antibody (N-term) (Cat. #AP12645a) flow cytometric analysis of 293 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated



goat-anti-rabbit secondary antibodies were used for the analysis.