

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

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|-----------------|---|
| 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}.

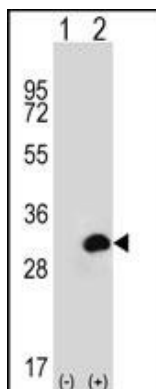
Background

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.

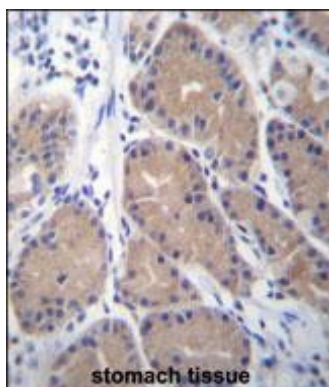
References

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

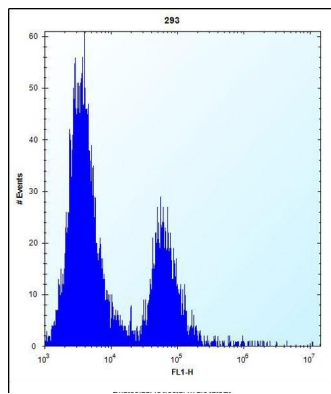


Western blot analysis of CA1 (arrow) using rabbit polyclonal CA1 Antibody (N-term) (Cat. #AP12645a). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected (Lane 2) with the CA1 gene.



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.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.