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

Goat Anti-CA1 Antibody

Peptide-affinity purified goat antibody
Catalog # AF1173a

Specification

Goat Anti-CA1 Antibody - Product Information

Application	**WB**
Primary Accession	P00915
Other Accession	NP_001729, 759, 12346 (mouse), 310218 (rat)
Reactivity	**Human**
Predicted	**Mouse, Rat**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**100ug/200ul**
Isotype	**IgG**
Calculated MW	**28870**

Goat Anti-CA1 Antibody - Additional Information

Gene ID 759

Other Names
Carbonic anhydrase 1, 4.2.1.1, Carbonate dehydratase I, Carbonic anhydrase B, CAB, Carbonic anhydrase I, CA-I, CA1

Format
0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Goat Anti-CA1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-CA1 Antibody - Protein Information

Name CA1

Function
Catalyzes the reversible hydration of carbon dioxide (PubMed:10550681, PubMed:18618712, PubMed:16807956, PubMed:16686544, PubMed:<a

href="http://www.uniprot.org/citations/17127057" target="_blank">17127057, PubMed:19186056, PubMed:19206230, PubMed:16506782, PubMed:17314045, PubMed:17407288). Can hydrate cyanamide to urea (PubMed:10550681).

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

Goat Anti-CA1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Goat Anti-CA1 Antibody - Images



AF1173a (0.03 µg/ml) staining of Human Liver lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

Goat Anti-CA1 Antibody - 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.

Goat Anti-CA1 Antibody - References

Diabetic retinopathy is not associated with carbonic anhydrase gene polymorphisms. Abhary S, et al. Mol Vis, 2009 Jun 13. PMID 19536309.
Toward a confocal subcellular atlas of the human proteome. Barbe L, et al. Mol Cell Proteomics, 2008 Mar. PMID 18029348.
Decreased total carbonic anhydrase esterase activity and decreased levels of carbonic anhydrase 1 isozyme in erythrocytes of type II diabetic patients. Gambhir KK, et al. Biochem Genet, 2007 Jun. PMID 17464559.
Phosph(on)ate as a zinc-binding group in metalloenzyme inhibitors: X-ray crystal structure of the antiviral drug foscarnet complexed to human carbonic anhydrase I. Temperini C, et al. Bioorg Med Chem Lett, 2007 Apr 15. PMID 17314045.
Carbonic anhydrase activators: the first X-ray crystallographic study of an adduct of isoform I. Temperini C, et al. Bioorg Med Chem Lett, 2006 Oct 1. PMID 16870440.