SANTA CRUZ BIOTECHNOLOGY, INC.

CA I (P-13): sc-50899

The Power to Question

BACKGROUND

Carbonic anhydrases (CAs), also designated carbonate dehydratases or carbonate hydrolyases, form a large family of genes that encode zinc metalloenzymes of great physiologic importance. As catalysts of the reversible hydration of carbon dioxide, these enzymes participate in a variety of biologic processes, including respiration, acid-base balance, bone resorption and calcification, as well as the formation of aqueous humor, cerebrospinal fluid, saliva and gastric acid. Genes in the α-carbonic anhydrase family encode either active carbonic anhydrase isozymes or "acatalytic" (devoid of CO_2 hydration activity) carbonic anhydrase-related proteins. Human CA I (CA1) is encoded by the CA1 gene, which has been assigned to chromosome 8 and harbors a cluster of CA genes. CA I localizes to the cytoplasm and research indicates that a severe deficiency of CA I does not result in any obvious hematological or renal consequences.

CHROMOSOMAL LOCATION

Genetic locus: CA1 (human) mapping to 8q21.2.

SOURCE

CA I (P-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of CA I of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-50899 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

CA I (P-13) is recommended for detection of CA I (carbonic anhydrase) of mouse and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

CA I (P-13) is also recommended for detection of CA I (carbonic anhydrase) in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for CA I siRNA (h): sc-60307, CA I siRNA (m): sc-60308, CA I shRNA Plasmid (h): sc-60307-SH, CA I shRNA Plasmid (m): sc-60308-SH, CA I shRNA (h) Lentiviral Particles: sc-60307-V and CA I shRNA (m) Lentiviral Particles: sc-60308-V.

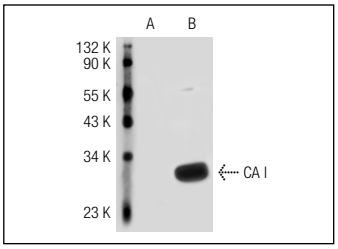
Molecular Weight of CA I: 29 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, HEL 92.1.7 cell lysate: sc-2270 or CA I (h): 293T lysate: sc-114146.

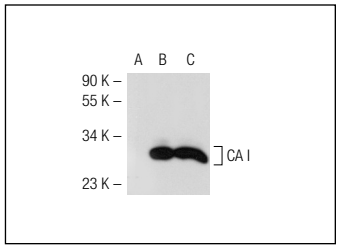
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



CA I (P-13): sc-50899. Western blot analysis of CA I expression in non-transfected: sc-117752 (**A**) and human CA I transfected: sc-114146 (**B**) 293T whole cell lysates.



CA I (P-13): sc-50899. Western blot analysis of CA I expression in non-transfected: sc-117752 (**A**) and mouse CA I transfected: sc-118938 (**B**) 293T whole cell lysates and mouse spleen tissue extract (**C**).

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.