CA I (F-11): sc-393497

BACKGROUND
Carbonic anhydrases (CAs), also designated carbonate dehydratases or carbonic anhydrase-related proteins, catalyze the hydration of carbon dioxide, which is essential for 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 “acalcatylic” (devoid of CO₂ hydration activity) carbonic anhydrase-related proteins. Human CA I (CA1) is encoded by the CA1 gene, which maps to a region on chromosome 8 that 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.

REFERENCES

CHROMOSOMAL LOCATION
Genetic locus: CA1 (human) mapping to 8q21.2; Car1 (mouse) mapping to 3 A1.

SOURCE
CA I (F-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 46-63 near the N-terminus of CA I of human origin.

PRODUCT
Each vial contains 200 µg IgG₁κ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-393497 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS
CA I (F-11) is recommended for detection of CA I of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:10000), 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:300).

CA I (F-11) is also recommended for detection of CA I in additional species, including canine 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: CA I (h): 293T Lysate: sc-114146 or human spleen extract: sc-36377.

RECOMMENDED SUPPORT REAGENTS


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

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