

CA XIII (N-19): sc-54769

BACKGROUND

Carbonic anhydrases (CAs) are members of a large family of zinc metalloenzymes responsible for catalyzing the reversible hydration of carbon dioxide. CAs show extensive diversity in their distribution and subcellular localization. They are involved in a variety of biological processes, including calcification, bone resorption, respiration, acid-base balance and the formation of aqueous humor, saliva, gastric juice and cerebrospinal fluid. CA XIII, also referred to as carbonate dehydratase XIII, is predominantly expressed in spleen, prostate, thymus, ovary, testis, colon and small intestine localizing to the cytoplasm. It exhibits highest homology with family members CA I, CA II and CA III. CA XIII may play a role in embryogenesis. Efficient inhibitors of CA XIII activity are sulfanilyl-sulfonamide type inhibitors.

REFERENCES

1. Lehtonen, J.M., et al. 2004. Carbonic anhydrase inhibitors. Inhibition of cytosolic isozyme XIII with aromatic and heterocyclic sulfonamides: a novel target for the drug design. *Bioorg. Med. Chem. Lett.* 14: 3757-3762.
2. Innocenti, A., et al. 2004. Carbonic anhydrase inhibitors. Inhibition of the newly isolated murine isozyme XIII with anions. *Bioorg. Med. Chem. Lett.* 14: 5435-5439.

CHROMOSOMAL LOCATION

Genetic locus: CA13 (human) mapping to 8q21.2.

SOURCE

CA XIII (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of CA XIII 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-54769 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CA XIII (N-19) is recommended for detection of CA XIII of 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 XIII (N-19) is also recommended for detection of CA XIII in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for CA XIII siRNA (h): sc-62044, CA XIII shRNA Plasmid (h): sc-62044-SH and CA XIII shRNA (h) Lentiviral Particles: sc-62044-V.

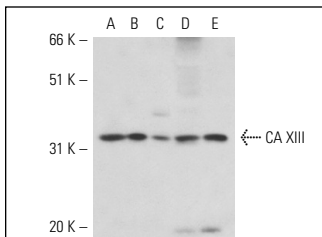
Molecular Weight of CA XIII: 30 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, HCT-8 cell lysate: sc-24675 or WiDr cell lysate: sc-24779.

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 XIII (N-19): sc-54769. Western blot analysis of CA XIII expression in Hep G2 (A), HISM (B), HS 181.Tes (C), HCT-8 (D) and WiDr (E) whole cell lysates.

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.

PROTOCOLS

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



Try **CA XIII (G-11): sc-376753** or **CA XIII (D-8): sc-374517**, our highly recommended monoclonal alternatives to CA XIII (N-19).