

AE2 (N-12): sc-46710

BACKGROUND

Primary canalicular bile undergoes a process of fluidization and alkalization along the biliary tract that is influenced by several factors, including hormones, innervation/neuropeptides and biliary constituents. The excretion of bicarbonate at both the canaliculi and the bile ducts is an important contributor to the generation of bile-salt independent flow. Bicarbonate is secreted from hepatocytes and cholangiocytes through parallel mechanisms which involve chloride efflux through activation of chloride channels and further bicarbonate secretion via AE2 (also designated SLC4A2)-mediated chloride/bicarbonate exchange. The AE2 protein regulates pH, chloride concentration, cell volume and transepithelial ion transport in many tissues. Gene silencing of AE2 causes a marked inhibition of unstimulated and secretin-stimulated chloride/bicarbonate exchange, which maintains the bile acid pool that is crucial for secretin to induce bicarbonate-rich choleresis.

CHROMOSOMAL LOCATION

Genetic locus: SLC4A2 (human) mapping to 7q36.1; Slc4a2 (mouse) mapping to 5 A3.

SOURCE

AE2 (N-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of AE2 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-46710 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

AE2 (N-12) is recommended for detection of AE2 of mouse, rat 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).

AE2 (N-12) is also recommended for detection of AE2 in additional species, including equine.

Suitable for use as control antibody for AE2 siRNA (h): sc-60056, AE2 siRNA (m): sc-60057, AE2 shRNA Plasmid (h): sc-60056-SH, AE2 shRNA Plasmid (m): sc-60057-SH, AE2 shRNA (h) Lentiviral Particles: sc-60056-V and AE2 shRNA (m) Lentiviral Particles: sc-60057-V.

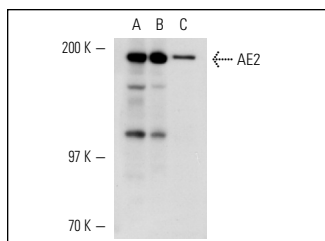
Molecular Weight of AE2: 165 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Caki-1 cell lysate: sc-2224 and SW480 cell lysate: sc-2219.

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



AE2 (N-12): sc-46710. Western blot analysis of AE2 expression in HeLa (A), Caki-1 (B) and SW480 (C) whole cell lysates.

SELECT PRODUCT CITATIONS

- Liu, L., et al. 2011. High capacity Na⁺/H⁺ exchange activity in mineralizing osteoblasts. *J. Cell. Physiol.* 226: 1702-1712.
- Su, Y., et al. 2011. Glyceraldehyde 3-phosphate dehydrogenase is required for band 3 (anion exchanger 1) membrane residency in the mammalian kidney. *Am. J. Physiol. Renal Physiol.* 300: F157-F166.

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.

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Try **AE2 (D-3): sc-376632**, our highly recommended monoclonal alternative to AE2 (N-12).