SANTA CRUZ BIOTECHNOLOGY, INC.

NHE-2 (H-14): sc-22928

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Na^+/H^+ exchangers-1-6 (Na^+/H^+ antiporters, NHE-1-6) are integral membrane proteins that are expressed in most mammalian tissues where they regulate intracellular pH and cell volume. NHE's mediate the secondary active extrusion of hydrogen (H^+) ions out of cells in exchange for extracellular sodium (Na^+). Excluding NHE-1, which is ubiquitously expressed, the NHE isoforms 2-6 have distinct tissue- and cell type-dependent expression, and inhibitory characteristics by amiloride analogs. Human NHE-2 protein, known also as solute carrier family 9 isoform-2, SLC9A2, is an 812 amino acid protein that is expressed in skeletal muscle, colon, kidney, testis, prostate, ovary and small intestine.

REFERENCES

1. Fliegel, L., et al. 1993. Cloning and analysis of the human myocardial Na^+/H^+ exchanger. Mol. Cell. Biochem. 125: 137-143.
2. Biemesderfer, D., et al. 1993. NHE3: a Na^+/H^+ exchanger isoform of renal brush border. Am. J. Physiol. 265: 736-742.
3. Noel, J., et al. 1995. Hormonal regulation, pharmacology and membrane sorting of vertebrate Na^+/H^+ exchanger isoforms. Am. J. Physiol. 268: 283-296.
4. Klanke, C.A., et al. 1995. Molecular cloning and physical and genetic mapping of a novel human Na^+/H^+ exchanger (NHE-5/SLC9A5) to chromosome 16q22.1. Genomics 25: 615-622.
5. Cox, G.A., et al. 1997. Sodium/hydrogen exchanger gene defect in slow-wave epilepsy mutant mice. Cell 91: 139-148.
6. Malakooti, J., et al. 1999. Molecular cloning, tissue distribution and functional expression of the human Na^+/H^+ exchanger NHE-2. Am. J. Physiol. 277: 383-390.

CHROMOSOMAL LOCATION

Genetic locus: SLC9A2 (human) mapping to 2q12.1; Slc9a2 (mouse) mapping to 1 B.

SOURCE

NHE-2 (H-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of NHE-2 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-22928 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.

RESEARCH USE

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

APPLICATIONS

NHE-2 (H-14) is recommended for detection of NHE-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

NHE-2 (H-14) is also recommended for detection of NHE-2 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for NHE-2 siRNA (h): sc-42652, NHE-2 siRNA (m): sc-42653, NHE-2 shRNA Plasmid (h): sc-42652-SH, NHE-2 shRNA Plasmid (m): sc-42653-SH, NHE-2 shRNA (h) Lentiviral Particles: sc-42652-V and NHE-2 shRNA (m) Lentiviral Particles: sc-42653-V.

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) 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.

SELECT PRODUCT CITATIONS

1. Amin, M.R., et al. 2011. Tumor necrosis factor-α represses the expression of NHE2 through NF-κB activation in intestinal epithelial cell model, C2BBe1. Inflamm. Bowel Dis. 17: 720-731.

PROTOCOLS

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