

NHERF-2 (C-2): sc-365388

BACKGROUND

The Na⁺/H⁺ exchange protein (NHE3) functions in transepithelial Na⁺ absorption and is primarily expressed in the intestinal and renal brush border membrane. NHE3 regulatory factor 1 (NHERF-1) interacts with NHE3 through two PDZ (for PSD-95, Discs-large and ZO-1 homology) domains, which are protein-protein interaction modules that associate with specific carboxy-terminal motifs on target proteins. Also known as EBP50, NHERF-1 facilitates cAMP inhibition of NHE3 to decrease Na⁺ adsorption. NHERF-1 functions as a scaffold for an essential multiprotein complex of Ezrin and NHE3 for cAMP-mediated phosphorylation and consequent inhibition of NHE3. The amino-terminal PDZ domain regulates the dimerization of NHERF-1 *in vivo*. G protein-coupled receptor kinase 6A phosphorylates NHERF-1 at Ser 289 via a PDZ domain-mediated interaction. NHERF-2, also known as E3KARP, which is ubiquitously expressed, also functions in NHE2 regulation.

CHROMOSOMAL LOCATION

Genetic locus: SLC9A3R2 (human) mapping to 16p13.3; Slc9a3r2 (mouse) mapping to 17 A3.3.

SOURCE

NHERF-2 (C-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 287-311 near the C-terminus of NHERF-2 of human origin.

PRODUCT

Each vial contains 200 µg IgG₃ 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-365388 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

NHERF-2 (C-2) is recommended for detection of NHERF-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), 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 1:30-1:3000).

Suitable for use as control antibody for NHERF-2 siRNA (h): sc-42522, NHERF-2 siRNA (m): sc-42523, NHERF-2 shRNA Plasmid (h): sc-42522-SH, NHERF-2 shRNA Plasmid (m): sc-42523-SH, NHERF-2 shRNA (h) Lentiviral Particles: sc-42522-V and NHERF-2 shRNA (m) Lentiviral Particles: sc-42523-V.

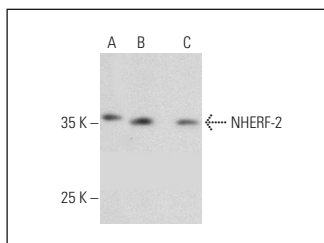
Molecular Weight of NHERF-2: 34 kDa.

Positive Controls: c4 whole cell lysate: sc-364186, NRK whole cell lysate: sc-364197 or NIH/3T3 whole cell lysate: sc-2210.

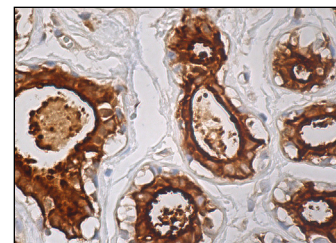
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



NHERF-2 (C-2): sc-365388. Western blot analysis of NHERF-2 expression in NIH/3T3 (A), c4 (B) and NRK (C) whole cell lysates.



NHERF-2 (C-2): sc-365388. Immunoperoxidase staining of formalin fixed, paraffin-embedded human breast tissue showing cytoplasmic and membrane staining of glandular cells.

SELECT PRODUCT CITATIONS

- Boratko, A., et al. 2012. Cell cycle dependent association of EBP50 with protein phosphatase 2A in endothelial cells. *PLoS ONE* 7: e35595.
- Boratko, A. and Csontos, C. 2013. NHERF2 is crucial in ERM phosphorylation in pulmonary endothelial cells. *Cell Commun. Signal.* 11: 99.
- Gao, F., et al. 2018. Autophagy regulates testosterone synthesis by facilitating cholesterol uptake in Leydig cells. *J. Cell Biol.* 217: 2103-2119.
- Reineke, L.C., et al. 2018. Chronic starvation induces noncanonical pro-death stress granules. *J. Cell Sci.* 131: jcs220244.
- Yanda, M.K., et al. 2020. A new role for heat shock factor 27 in the pathophysiology of Clostridium difficile toxin B. *Am. J. Physiol. Gastrointest. Liver Physiol.* 18: G120-G129.

STORAGE

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

PROTOCOLS

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