**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. NHEs 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 (NHE-2-6) have distinct tissue- and cell type-dependent expression and inhibitory characteristics by amiloride analogs. Human NHE-1 protein, known also as solute carrier family 9 isoform-1, SLC9A1, is a ten transmembrane domain-spanning receptor that contains an N-terminal amphiphatic domain and two putative N-glycosylation sites.

**CHROMOSOMAL LOCALIZATION**

Genetic locus: SLC9A1 (human) mapping to 1p36.11; Slc9a1 (mouse) mapping to 4 D2.3.

**SOURCE**

NHE-1 (54) is a mouse monoclonal antibody raised against amino acids 682-801 of NHE-1 of rat origin.

**PRODUCT**

Each vial contains 200 µg IgG1 in 1.0 ml of PBS with <0.1% sodium azide and 0.1% gelatin.

NHE-1 (54) is available conjugated to agarose (sc-136239 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; and to HRP (sc-136239 HRP), 200 µg/ml, for WB, IHC (P) and ELISA.

Blocking peptide available for competition studies, sc-136239 P, (100 µg peptide in 0.5 ml PBS containing <0.1% sodium azide and 0.2% stabilizer protein).

**APPLICATIONS**

NHE-1 (54) is recommended for detection of NHE-1 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

NHE-1 (54) is also recommended for detection of NHE-1 in additional species, including canine.

Suitable for use as control antibody for NHE-1 siRNA (h): sc-42650, NHE-1 siRNA (m): sc-42651, NHE-1 shRNA Plasmid (h): sc-42650-SH, NHE-1 shRNA Plasmid (m): sc-42651-SH, NHE-1 shRNA (h) Lentiviral Particles: sc-42650-V and NHE-1 shRNA (m) Lentiviral Particles: sc-42651-V.

Molecular Weight of NHE-1 precursor: 90 kDa.

Molecular Weight of glycosylated NHE-1: 110-130 kDa.

Molecular Weight of NHE-1 dimer: 210 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, MOLT-4 cell lysate: sc-2233 or HeLa whole cell lysate: sc-2200.

**STORAGE**

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

**DATA**

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

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