NHE-3 (19F5): sc-58636

**BACKGROUND**

Na+/H+ exchangers-1-8 (also designated NHE-1-8 or Na+/H+ antipolers) are integral membrane proteins that are expressed in most mammalian tissues, where they regulate intracellular pH and cell volume. NHEs mediate the transport of hydrogen H+ ions out of cells in exchange for extracellular sodium Na+ ions. While NHE-1 is ubiquitously expressed, the NHE isoforms 2-8 have distinct tissue- and cell type-dependent expression and inhibitory characteristics. NHE-3 localizes to the apical membrane of renal proximal tubules where it is responsible for most of the sodium transport and fluid reabsorption. NHE-3 translocates to internal pools where it mediates natriuresis when blood pressure increases abruptly. NHE-3 is also expressed in the stomach and functions to protect the mucosa by secreting protons that diffuse into the mucous cells.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: Slc9a3 (mouse) mapping to 13 C1.

**SOURCE**

NHE-3 (19F5) is a mouse monoclonal antibody raised against amino acids 702-832 of NHE-3 of rabbit origin.

**PRODUCT**

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

**APPLICATIONS**

NHE-3 (19F5) is recommended for detection of NHE-3 of mouse, rat and rabbit 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for NHE-3 siRNA (m): sc-36060, NHE-3 shRNA Plasmid (m): sc-36060-SH and NHE-3 shRNA (m) Lentiviral Particles: sc-36060-V.

Molecular Weight of glycosylated NHE-3 isoforms: 93/80-100 kDa.

Positive Controls: rat kidney extract: sc-2394.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended:

1) Western Blotting: use m-IgGx BP-HRP: sc-516102 or m-IgGx 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-IgGx BP-FITC: sc-516140 or m-IgGx 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-IgGx BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

**DATA**

![Western blot analysis of NHE-3 expression in rat kidney tissue extract.](image)

**SELECT PRODUCT CITATIONS**


**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 for detailed protocols and support products.