

NHE-8 (K-17): sc-85788

BACKGROUND

Na⁺/H⁺ exchangers 1-8, also designated Na⁺/H⁺ antiporters or NHE-1-8, are integral membrane proteins 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, NHE isoforms 2-8 have distinct tissue and cell type dependent expression and inhibitory characteristics. NHE-8 is a 575 amino acid protein that localizes apically in intestinal epithelial cells. Expression of NHE-8 is higher in young mammals than adults. NHE-8 gene and protein expression are highly regulated during ontogeny; this protein may play an important role in intestinal Na⁺ absorption during early mammalian life.

REFERENCES

- Orlowski, J., Kandasamy, R.A. and Shull, G.E. 1992. Molecular cloning of putative members of the Na/H exchanger gene family. cDNA cloning, deduced amino acid sequence and mRNA tissue expression of the rat Na/H exchanger NHE-1 and two structurally related proteins. *J. Biol. Chem.* 267: 9331-9339.
- Harris, S.P., Strong, T.V., Wys, N., Richards, N.W., Pouyssegur, J., Ernst, S.A. and Dawson, D.C. 1997. Epithelial localization of a reptilian Na⁺/H⁺ exchanger homologous to NHE-1. *Am. J. Physiol.* 272: 1594-1606.
- Sangan, P., Rajendran, V.M., Geibel, J.P. and Binder, H.J. 2002. Cloning and expression of a chloride-dependent Na⁺/H⁺ exchanger. *J. Biol. Chem.* 277: 9668-9675.
- Goyal, S., Vanden Heuvel, G. and Aronson, P.S. 2003. Renal expression of novel Na⁺/H⁺ exchanger isoform NHE-8. *Am. J. Physiol. Renal Physiol.* 284: 467-473.
- Goyal, S., Mentone, S. and Aronson, P.S. 2005. Immunolocalization of NHE-8 in rat kidney. *Am. J. Physiol. Renal Physiol.* 288: 530-538.
- Xu, H., Chen, R. and Ghishan, F.K. 2005. Subcloning, localization and expression of the rat intestinal sodium-hydrogen exchanger isoform 8. *Am. J. Physiol. Gastrointest. Liver Physiol.* 289: 36-41.

CHROMOSOMAL LOCATION

Genetic locus: SLC9A8 (human) mapping to 20q13.13; Slc9a8 (mouse) mapping to 2 H3.

SOURCE

NHE-8 (K-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of NHE-8 of human origin.

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 or our catalog for detailed protocols and support products.

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-85788 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

NHE-8 (K-17) is recommended for detection of NHE-8 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); non cross-reactive with other NHE family members.

NHE-8 (K-17) is also recommended for detection of NHE-8 in additional species, including equine, canine and avian.

Suitable for use as control antibody for NHE-8 siRNA (h): sc-75912, NHE-8 siRNA (m): sc-149957, NHE-8 shRNA Plasmid (h): sc-75912-SH, NHE-8 shRNA Plasmid (m): sc-149957-SH, NHE-8 shRNA (h) Lentiviral Particles: sc-75912-V and NHE-8 shRNA (m) Lentiviral Particles: sc-149957-V.

Molecular Weight of non-glycosylated NHE-8: 55 kDa.

Molecular Weight of glycosylated NHE-8: 85 kDa.

Positive Controls: BC3H1 cell lysate: sc-2299 or c4 whole cell lysate: sc-364186.

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.

RESEARCH USE

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


 MONOS
Satisfaction
Guaranteed

Try **NHE-8 (7A11): sc-53902**, our highly recommended monoclonal alternative to NHE-8 (K-17).