

NHE-9 (C-14): sc-99567

BACKGROUND

NHE-9 (Na⁺/H⁺ exchanger 9), also known as SLC9A9 (solute carrier family 9 (sodium/hydrogen exchanger), member 9), is a 645 amino acid multi-pass membrane protein that localizes to late endosomes and belongs to the mono-valent cation/proton antiporter family of ion transporters. Expressed ubiquitously with highest levels present in heart and skeletal muscle and lower levels present in liver, placenta and kidney, NHE-9 is thought to play a role in the electroneutral exchange of sodium ions for protons across membrane and, via this activity, is involved in the maintenance of organelle ion homeostasis. Chromosomal aberrations in the NHE-9 gene are associated with the pathogenesis of early-onset behavioral/developmental disorder with features of attention deficit-hyperactivity disorder and intellectual disability (ADHD).

REFERENCES

1. de Silva, et al. 2003. Disruption of a novel member of a sodium/hydrogen exchanger family and DOCK3 is associated with an attention deficit hyperactivity disorder-like phenotype. *J. Med. Genet.* 40: 733-740.
2. Nakamura, N., et al. 2005. Four Na⁺/H⁺ exchanger isoforms are distributed to Golgi and post-Golgi compartments and are involved in organelle pH regulation. *J. Biol. Chem.* 280: 1561-1572.
3. Lasky-Su, J., et al. 2008. Genome-wide association scan of the time to onset of attention deficit hyperactivity disorder. *Am. J. Med. Genet. B Neuropsychiatr. Genet.* 147B: 1355-1358.
4. Sutcliffe, J.S. 2008. Genetics. Insights into the pathogenesis of autism. *Science* 321: 208-209.
5. Morrow, E.M., et al. 2008. Identifying autism loci and genes by tracing recent shared ancestry. *Science* 321: 218-223.
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CHROMOSOMAL LOCATION

Genetic locus: SLC9A9 (human) mapping to 3q24; Slc9a9 (mouse) mapping to 9 E3.3.

SOURCE

NHE-9 (C-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of NHE-9 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-99567 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.

APPLICATIONS

NHE-9 (C-14) is recommended for detection of NHE-9 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)], 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-9 (C-14) is also recommended for detection of NHE-9 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for NHE-9 siRNA (h): sc-77892, NHE-9 siRNA (m): sc-149958, NHE-9 shRNA Plasmid (h): sc-77892-SH, NHE-9 shRNA Plasmid (m): sc-149958-SH, NHE-9 shRNA (h) Lentiviral Particles: sc-77892-V and NHE-9 shRNA (m) Lentiviral Particles: sc-149958-V.

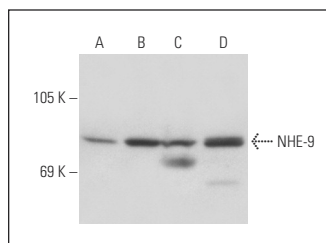
Molecular Weight of NHE-9: 73 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, Sol8 cell lysate: sc-2249 or JAR cell lysate: sc-2276.

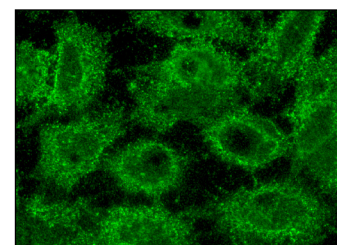
RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



NHE-9 (C-14): sc-99567. Western blot analysis of NHE-9 expression in Hep G2 (A), c4 (B), Sol8 (C) and JAR (D) whole cell lysates.



NHE-9 (C-14): sc-99567. Immunofluorescence staining of formalin-fixed HepG2 cells showing cytoplasmic localization.

RESEARCH USE

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

PROTOCOLS

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