

NHE-9 (I-19): sc-99568

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 (I-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region 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-99568 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 (I-19) 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 (I-19) is also recommended for detection of NHE-9 in additional species, including equine, canine and bovine.

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.

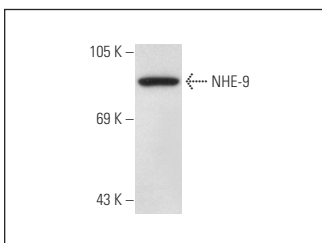
Molecular Weight of NHE-9: 73 kDa.

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 (I-19): sc-99568. Western blot analysis of NHE-9 expression in JAR whole cell lysate.

RESEARCH USE

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

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Try **NHE-9 (B-2): sc-515758**, our highly recommended monoclonal alternative to NHE-9 (I-19).