

# NHE-9 (B-2): sc-515758

## BACKGROUND

NHE-9 (Na<sup>+</sup>/H<sup>+</sup> 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 monovalent 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, M.G., 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<sup>+</sup>/H<sup>+</sup> 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

NHE-9 (B-2) is a mouse monoclonal antibody raised against amino acids 51-131 mapping near the N-terminus of NHE-9 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

NHE-9 (B-2) is available conjugated to agarose (sc-515758 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515758 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515758 PE), fluorescein (sc-515758 FITC), Alexa Fluor® 488 (sc-515758 AF488), Alexa Fluor® 546 (sc-515758 AF546), Alexa Fluor® 594 (sc-515758 AF594) or Alexa Fluor® 647 (sc-515758 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515758 AF680) or Alexa Fluor® 790 (sc-515758 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

NHE-9 (B-2) is recommended for detection of NHE-9 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

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.

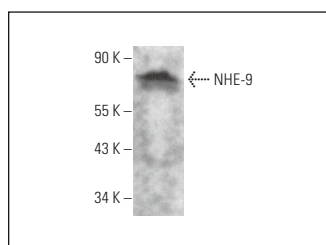
Molecular Weight of NHE-9: 73 kDa.

Positive Controls: c4 whole cell lysate: sc-364186.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



NHE-9 (B-2): sc-515758. Western blot analysis of NHE-9 expression in c4 whole cell lysate.

## 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](http://www.scbt.com) for detailed protocols and support products.