

Nhe-1 Antibody

Nhe-1 (IN): Sodium-hydrogen exchanger 1, solute carrier family 9 member 1, SLC9A1, Na⁺/H⁺ antiporter

CATALOG No.:4379

BACKGROUND:

The Na⁺/H⁺ antiporter (Nhe-1) is a ubiquitous membrane-bound enzyme involved in pH regulation of vertebrate cells and is specifically inhibited by the diuretic drug amiloride and activated by a variety of signals including growth factors, mitogens, neurotransmitters, and tumor promoters (1). Nhe-1 acts as an anchor for actin filaments to control the integrity of the cortical cytoskeleton. This occurs through a previously unrecognized structural link between Nhe-1 and the actin-binding proteins ezrin, radixin, and moesin, collectively referred to as ERM proteins. A structural role for Nhe-1 has been proposed in regulating the cortical cytoskeleton that is independent of its function as an ion exchanger (2). It is also thought that Nhe-1 play a role in hypertension (3). At least two isoforms of Nhe-1 are known to exist.

SOURCE:

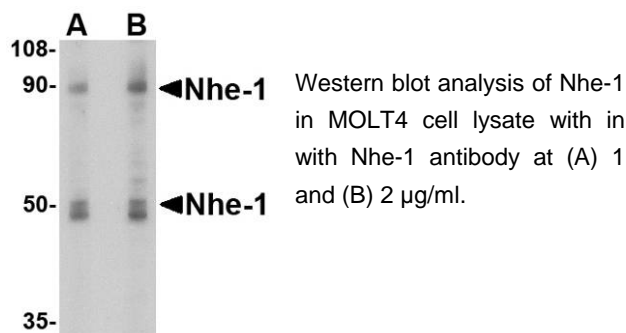
Rabbit polyclonal Nhe-1 antibody was raised against a 17 amino acid peptide near the center of the human Nhe-1 (GenBank accession no. P19634).

APPLICATION:

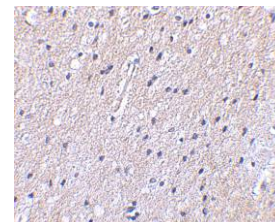
Nhe-1 antibody can be used for detection of Nhe-1 by Western blot at 1 – 2 µg/ml. (Optimal dilution should be determined by user.) MOLT4 cell lysate can be used as positive control. Nhe-1 antibody is human, mouse and rat reactive. **For research use only.**

STORAGE:

Nhe-1 antibody is supplied as immunoaffinity purified IgG in PBS containing 0.02% sodium azide. Store at 4°C, stable for one year.



Immunohistochemical staining of human brain tissue using Nhe-1 antibody at 2.5 µg/ml.



RELATED PRODUCTS:

Blocking Peptide, Catalog No. **4379P**.

MOLT4 Cell Lysate, Catalog No. **1206**.

Nhe-1 Antibody (CT), Catalog No. **4377**.

REFERENCES:

1. Mendoza SA. The Na⁺-H⁺ antiport is a mediator of cell proliferation. *Acta Paediatr. Scand.* 1987; 76:545-7.
2. Denker SP, Huang DC, Orlowski J, et al. Direct binding of the NA—H exchanger NHE1 to ERM proteins regulates the cortical cytoskeleton and cell shape independently of H(+) translocation. *Mol. Cell.* 2000; 6:1425-36.
3. Cingolani HE, Rebolledo OR, Portiansky EL, et al. Regression of hypertensive myocardial fibrosis by NA (+)/H(+) exchange inhibition. *Hypertension* 2003; 41:373-7. (08-01D)