



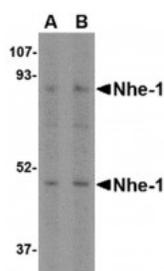
**ProSci Incorporated**  
12170 Flint Place  
Poway, CA 92064

**Toll Free:** +1 (888) 513 9525  
**Local:** +1 (858) 513 2638  
**Fax:** +1 (858) 513 2692

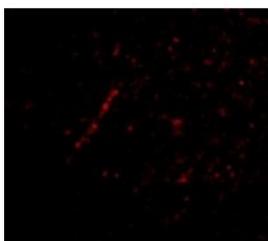
**techsupport@prosci-inc.com**  
**prosci-inc.com**

## Nhe-1 Antibody

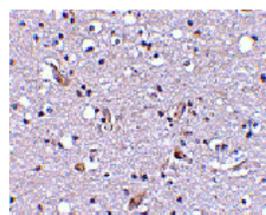
CATALOG NUMBER: 4377



Western blot analysis of Nhe-1 in rat kidney tissue lysate with in with Nhe-1 antibody at (A) 1 and (B) 2 ug/mL.



Immunofluorescence of Nhe-1 in Human Brain tissue with Nhe-1 antibody at 20 ug/mL.



Immunohistochemical staining of human brain tissue using Nhe-1 antibody at 2.5 ug/mL.

### Specifications

<b>SPECIES REACTIVITY:</b>	Human, Mouse, Rat
<b>HOMOLOGY:</b>	Predicted species reactivity based on immunogen sequence: Rabbit: (95%), Pig: (95%), Bovine: (95%)
<b>TESTED APPLICATIONS:</b>	ELISA, IF, IHC-P, WB
<b>APPLICATIONS:</b>	Nhe-1 antibody can be used for detection of Nhe-1 by Western blot at 1 - 2 ug/mL. Antibody can also be used for immunohistochemistry starting at 2.5 ug/mL. For immunofluorescence start at 20 ug/mL.
<b>USER NOTE:</b>	Optimal dilutions for each application to be determined by the researcher.
<b>POSITIVE CONTROL:</b>	1) Cat. No. 1465 - Rat Kidney Tissue Lysate 2) Cat. No. 10-301 - Human Brain Tissue Slide
<b>PREDICTED MOLECULAR WEIGHT:</b>	Predicted: 52, 90 kDa Observed: 50, 90 kDa
<b>SPECIFICITY:</b>	At least three isoforms of Nhe-1 are known to exist.
<b>IMMUNOGEN:</b>	Nhe-1 antibody was raised against a 20 amino acid synthetic peptide near the carboxy terminus of the human Nhe-1.  The immunogen is located within the last 50 amino acids of Nhe-1.
<b>HOST SPECIES:</b>	Rabbit

### Properties

<b>PURIFICATION:</b>	Nhe-1 Antibody is affinity chromatography purified via peptide column.
<b>PHYSICAL STATE:</b>	Liquid
<b>BUFFER:</b>	Nhe-1 Antibody is supplied in PBS containing 0.02% sodium azide.
<b>CONCENTRATION:</b>	1 mg/mL
<b>STORAGE CONDITIONS:</b>	Nhe-1 antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies

care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

<b>CLONALITY:</b>	Polyclonal
<b>ISOTYPE:</b>	IgG
<b>CONJUGATE:</b>	Unconjugated

#### Additional Info

<b>ALTERNATE NAMES:</b>	Nhe-1 Antibody: APNH, NHE1, NHE-1, APNH1, APNH
<b>ACCESSION NO.:</b>	P19634
<b>PROTEIN GI NO.:</b>	127809
<b>OFFICIAL SYMBOL:</b>	SLC9A1
<b>GENE ID:</b>	6548

#### Background

<b>BACKGROUND:</b>	<p>Nhe-1 Antibody: The Na<sup>+</sup>/H<sup>+</sup> 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. 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. It is also thought that Nhe-1 play a role in hypertension.</p>
<b>REFERENCES:</b>	<ol style="list-style-type: none"><li>1) Mendoza SA. The Na<sup>+</sup>-H<sup>+</sup> antiport is a mediator of cell proliferation. <i>Acta Paediatr. Scand.</i> 1987; 76:545-7.</li><li>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. <i>Mol. Cell.</i> 2000; 6:1425-36.</li><li>3) Cingolani HE, Rebolledo OR, Portiansky EL, et al. Regression of hypertensive myocardial fibrosis by NA (+)/H(+) exchange inhibition. <i>Hypertension</i> 2003; 41:373-7.</li></ol>

**FOR RESEARCH USE ONLY**

February 13, 2018