10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

# Anti-SLC9A1 Picoband Antibody
**Catalog # ABO11849**

## Specification

### Anti-SLC9A1 Picoband Antibody - Product Information

| | |
|---|---|
| Application | **WB, IHC** |
| Primary Accession | P19634 |
| Host | **Rabbit** |
| Reactivity | **Human, Mouse, Rat** |
| Clonality | **Polyclonal** |
| Format | **Lyophilized** |

**Description**
Rabbit IgG polyclonal antibody for Sodium/hydrogen exchanger 1(SLC9A1) detection. Tested with WB, IHC-P in Human;Mouse;Rat.

**Reconstitution**
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

### Anti-SLC9A1 Picoband Antibody - Additional Information

**Gene ID** 6548

**Other Names**
Sodium/hydrogen exchanger 1, APNH, Na(+)/H(+) antiporter, amiloride-sensitive, Na(+)/H(+) exchanger 1, NHE-1, Solute carrier family 9 member 1, SLC9A1, APNH1, NHE1

**Calculated MW**
90763 MW KDa

**Application Details**
Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Mouse, Rat, By Heat<br>Western blot, 0.1-0.5 µg/ml, Human, Rat<br>

**Subcellular Localization**
Membrane; Multi-pass membrane protein. Endoplasmic reticulum membrane ; Multi-pass membrane protein . Cell membrane; Multi-pass membrane protein. Colocalizes with CHP1 at the reticulum endoplasmic (By similarity). Colocalizes with CHP1 and CHP2 at the plasma membrane. .

**Tissue Specificity**
Kidney and intestine.

**Protein Name**
Sodium/hydrogen exchanger 1

**Contents**
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.

**Immunogen**
E.coli-derived human SLC9A1 recombinant protein (Position: H543-Q815). Human SLC9A1 shares

92% and 93% amino acid (aa) sequences identity with mouse and rat SLC9A1, respectively.

**Purification**
Immunogen affinity purified.

**Cross Reactivity**
No cross reactivity with other proteins

| | |
|---|---|
| Storage | **At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.** |

**Sequence Similarities**
Belongs to the monovalent cation:proton antiporter 1 (CPA1) transporter (TC 2.A.36) family.

## Anti-SLC9A1 Picoband Antibody - Protein Information

**Name** SLC9A1 (HGNC:11071)

**Function**
Electroneutral Na(+) /H(+) antiporter that extrudes Na(+) in exchange for external protons driven by the inward sodium ion chemical gradient, protecting cells from acidification that occurs from metabolism (PubMed:<a href="http://www.uniprot.org/citations/7110335" target="_blank">7110335</a>, PubMed:<a href="http://www.uniprot.org/citations/7603840" target="_blank">7603840</a>, PubMed:<a href="http://www.uniprot.org/citations/11532004" target="_blank">11532004</a>, PubMed:<a href="http://www.uniprot.org/citations/11350981" target="_blank">11350981</a>, PubMed:<a href="http://www.uniprot.org/citations/15035633" target="_blank">15035633</a>, PubMed:<a href="http://www.uniprot.org/citations/14680478" target="_blank">14680478</a>, PubMed:<a href="http://www.uniprot.org/citations/17073455" target="_blank">17073455</a>, PubMed:<a href="http://www.uniprot.org/citations/22020933" target="_blank">22020933</a>, PubMed:<a href="http://www.uniprot.org/citations/27650500" target="_blank">27650500</a>, PubMed:<a href="http://www.uniprot.org/citations/15677483" target="_blank">15677483</a>, PubMed:<a href="http://www.uniprot.org/citations/32130622" target="_blank">32130622</a>, PubMed:<a href="http://www.uniprot.org/citations/17493937" target="_blank">17493937</a>). Exchanges intracellular H(+) ions for extracellular Na(+) in 1:1 stoichiometry (By similarity). Plays a key role in maintening intracellular pH neutral and cell volume, and thus is important for cell growth, proliferation, migration and survival (PubMed:<a href="http://www.uniprot.org/citations/8901634" target="_blank">8901634</a>, PubMed:<a href="http://www.uniprot.org/citations/12947095" target="_blank">12947095</a>, PubMed:<a href="http://www.uniprot.org/citations/15096511" target="_blank">15096511</a>, PubMed:<a href="http://www.uniprot.org/citations/22020933" target="_blank">22020933</a>). In addition, can transport lithium Li(+) and functions also as a Na(+)/Li(+) antiporter (PubMed:<a href="http://www.uniprot.org/citations/7603840" target="_blank">7603840</a>). SLC9A1 also functions in membrane anchoring and organization of scaffolding complexes that coordinate signaling inputs (PubMed:<a href="http://www.uniprot.org/citations/15096511" target="_blank">15096511</a>).

**Cellular Location**
Cell membrane; Multi-pass membrane protein. Basolateral cell membrane {ECO:0000250|UniProtKB:P48762}; Multi-pass membrane protein. Note=Localized basolaterally in every epithelial cell, except in the choroid plexus where SLC9A1 is expressed luminally.

**Tissue Location**
Kidney and intestine.

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## Anti-SLC9A1 Picoband Antibody - Protocols

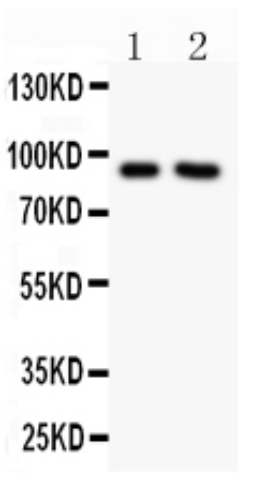
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

## Anti-SLC9A1 Picoband Antibody - Images

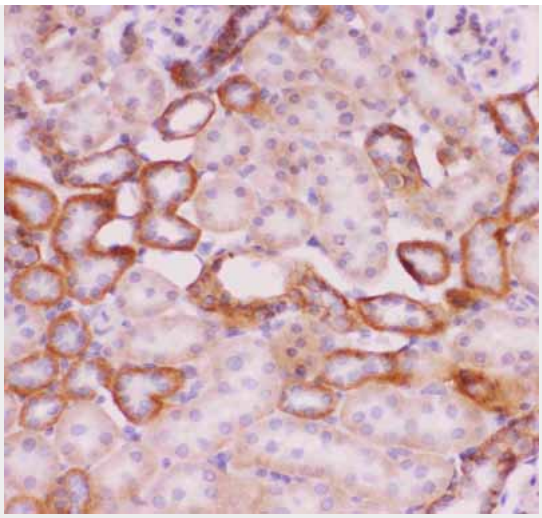



Anti-SLC9A1 Picoband antibody, ABO11849-1.jpgAll lanes: Anti SLC9A1 (ABO11849) at 0.5ug/mlWB: Recombinant Human Sodium Protein 0.5ngPredicted bind size: 37KDObserved bind size: 37KD

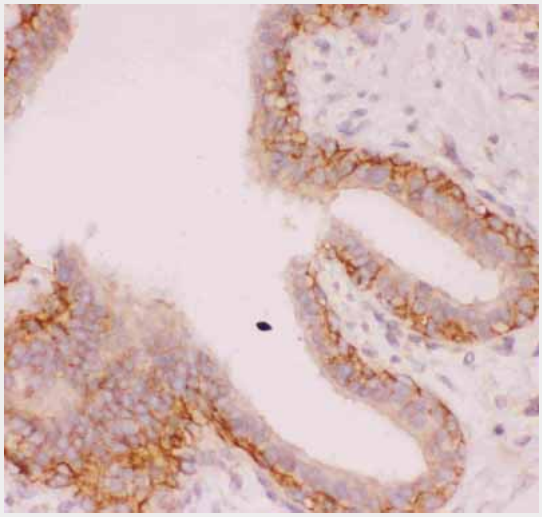



Anti-SLC9A1 Picoband antibody, ABO11849-2.jpgAll lanes: Anti SLC9A1 (ABO11849) at 0.5ug/mlLane 1: PC-12 Whole Cell Lysate at 40ugLane 2: MCF-7 Whole Cell Lysate at 40ugPredicted bind size: 91KDObserved bind size: 91KD

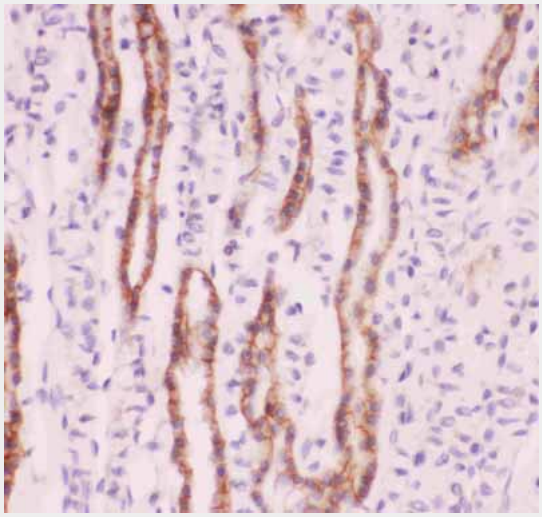
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Anti-SLC9A1 Picoband antibody, ABO11849-3.JPGIHC(P): Rat Kidney Tissue



Anti-SLC9A1 Picoband antibody, ABO11849-4.JPGIHC(P): Human Mammary Cancer Tissue



Anti-SLC9A1 Picoband antibody, ABO11849-5.JPGIHC(P): Mouse Kidney Tissue

**Anti-SLC9A1 Picoband Antibody - Background**

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NHE1, also known as SLC9A1, is an isoform of sodiumâ€“hydrogen antiporter that in humans is encoded by the SLC9A1 gene. It is mapped to 1p36.11. NHE1 is a ubiquitous membrane-bound enzyme involved in pH regulation of vertebrate cells. It is specifically inhibited by the diuretic drug amiloride and activated by a variety of signals including growth factors, mitogens, neurotransmitters, tumor promoters, and others. The plasma membrane ion exchanger NHE1 acts as an anchor for actin filaments to control the integrity of the cortical cytoskeleton. And a structural role for NHE1 in regulating the cortical cytoskeleton that is independent of its function as an ion exchanger. NHE1 is a plausible candidate gene for human essential hypertension.