

## Product datasheet for **TA328914**

### Slc9a1 Rabbit Polyclonal Antibody

#### Product data:

Product Type:	Primary Antibodies
Applications:	FC, IF, WB
Recommended Dilution:	WB: 1:200-1:2000; FC: 1:50-1:600
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Peptide (C)RERSIGDVTTAPSE, corresponding to amino acid residues 54-67 of rat NHE-1 . 1st <sup>Å</sup> extracellular loop.
Formulation:	Lyophilized. Concentration before lyophilization ~0.8mg/ml (lot dependent, please refer to CoA along with shipment for actual concentration). Buffer before lyophilization: Phosphate buffered saline (PBS), pH 7.4, 1% BSA, 0.05% NaN <sub>3</sub> .
Reconstitution Method:	Add 50 ul double distilled water (DDW) to the lyophilized powder.
Purification:	Affinity purified on immobilized antigen.
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	solute carrier family 9 member A1
Database Link:	<a href="#">NP_036784</a> <a href="#">Entrez Gene 6548 Human</a> <a href="#">Entrez Gene 20544 Mouse</a> <a href="#">Entrez Gene 24782 Rat</a> <a href="#">P26431</a>



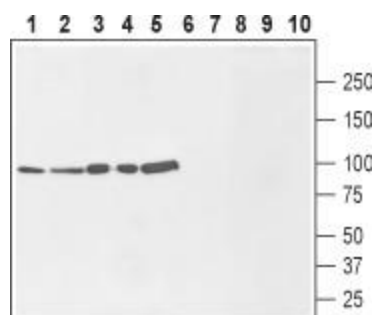
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**Background:**

In order to function in optimal conditions, cells must maintain a close to neutral intracellular pH. They have adopted various mechanisms in order to do so, one of which is via Na<sup>+</sup>/H<sup>+</sup> exchangers (NHEs). Genes belonging to this group are expressed along a very broad range of organisms and are essential for protecting cells against intracellular acidification. To date, nine genes have been identified in mammals; NHE1-9. These membrane proteins have 10-12 transmembrane domains depending on whether a splice variant is expressed and an intracellular N-terminal. The C-terminal domain can be either intracellular or extracellular, also depending on whether a splice variant of the protein is involved. The C-terminal part of the protein also undergoes posttranslational modification such as phosphorylation. Both NHE-1 and NHE-2 have an extracellular loop which is glycosylated. Under physiological conditions, the Na<sup>+</sup>/H<sup>+</sup> exchanger mediates the exchange of one extracellular Na<sup>+</sup> ion for one intracellular proton, thereby keeping the overall charge neutral<sup>1</sup>. The extracellular binding site of Na<sup>+</sup> is not selective as it can also bind Li<sup>+</sup> and H<sup>+</sup>. K<sup>+</sup> ions inhibit NHE-1 but have no effect on NHE-2. The activation of NHE-1 and NHE-2 is sensitive to intracellular acidic pH. Under physiological conditions, both exchangers are not active and upon a drop of intracellular pH, they are rapidly activated. NHE-1 expression is ubiquitous and may serve as a housekeeping gene.

**Synonyms:**

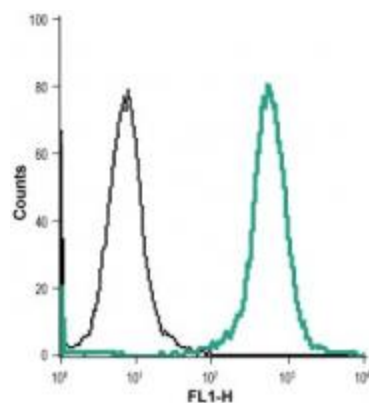
APNH; APNH1; FLJ42224; NHE-1; NHE1

**Product images:**


Western blot analysis of rat brain membranes (lanes 1 and 6), mouse brain lysate (lanes 2 and 7), human MCF-7 breast adenocarcinoma cells (lanes 3 and 8), human U-87 MG glioblastoma cells (lanes 4 and 9) and human THP-1 acute monocytic leukemia cells (lanes 5 and 10): 1-5. Anti-Na<sup>+</sup>/H<sup>+</sup> Exchanger 1 (NHE-1) (extracellular) antibody, (1:200). 6-10. Anti-Na<sup>+</sup>/H<sup>+</sup> Exchanger 1 (NHE-1) (extracellular) antibody, preincubated with the control peptide antigen.



Expression of NHE-1 in human MCF-7 cells. Immunocytochemical staining of live intact human MCF-7 breast adenocarcinoma cells. A. Extracellular labeling of cells with Anti-Na<sup>+</sup>/H<sup>+</sup> Exchanger 1 (NHE-1) (extracellular) antibody, (1:25), followed by goat anti-rabbit-AlexaFluor-594 secondary antibody (red). B. Live view of the cells. C. Merge of the two pictures.



Indirect flow cytometry analysis of live intact THP-1 (human acute monocytic leukemia cells) cell line: black line: Cells + goat anti-rabbit-DyLight-488. green line: Cells + Anti-Na<sup>+</sup>/H<sup>+</sup> Exchanger 1 (NHE-1) (extracellular) antibody, (1:20) + goat-anti-rabbit-DyLight-488.