Datasheet for ABIN968659

anti-SLC9A1 antibody (AA 682-801)

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Overview

Quantity:	50 µg
Target:	SLC9A1
Binding Specificity:	AA 682-801
Reactivity:	Human, Rat, Mouse, Dog
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This SLC9A1 antibody is un-conjugated
Application:	Western Blotting (WB), Immunofluorescence (IF)

Product Details

Immunogen:	Rat NHE-1 aa. 682-801
Clone:	54-NHE
Isotype:	IgG1
Cross-Reactivity:	Human, Mouse (Murine), Dog (Canine)
Characteristics:	1. Since applications vary, each investigator should titrate the reagent to obtain optimal results. 2. Source of all serum proteins is from USDA inspected abattoirs located in the United States. 3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing. 4. Please refer to us for technical protocols.
Purification:	The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity

Product Details

	chromatography.

Target Details

Target:	SLC9A1
Alternative Name:	NHE-1 (SLC9A1 Products)
Background:	The extrusion of H+ in exchange for extracellular Na+ is important for many cellular processes, such as pH homeostasis, volume regulation, and transepithelial ion and water transport. Na+/H+ Exchangers (NHE) are integral membrane proteins that mediate electroneutral exchange of one Na+ ion for one H+ ion. Six NHE forms, NHE-1 thru -6, have been identified. NHE-1 and NHE-6 are widely expressed, while the other NHE forms have restricted expression. The common structure of all NHE forms includes 10-12 N-terminal membrane (M) spanning regions, a conserved M6 and M7 region that may participate in ion transport, and a large C-terminal cytoplasmic region that may be involved in the regulation of ion exchange activity. NHE-1, for example, contains 12 M regions plus domains for volume sensitivity, calmodulin-binding, CHP-binding, and PKC phosphorylation in the cytoplasmic region. Regulation of NHE-1 ion exchange activity may occur through phosphoinositide binding, as well as PKC- and PKA-dependent signaling pathways. Mutation of NHE-1 in mice causes neuronal death in the cerebellum and brainstem, leading to ataxia and seizures. Thus, NHE-1 is a ubiquitous NHE that is essential for normal brain function. Although this antibody was developed against the NHE-1 antigen, investigators should note that crossreactivity to other NHE isoforms or variants may be possible. Synonyms: Na+/H+ Exchangers
Molecular Weight:	92 kDa
Pathways:	Glycosaminoglycan Metabolic Process, Proton Transport

Application Details

Comment:	Related Products: ABIN967389
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	250 µg/mL

Handling

Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09 % sodium azide.
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	-20 °C
Storage Comment:	Store undiluted at -20°C.

Publications

Product cited in:

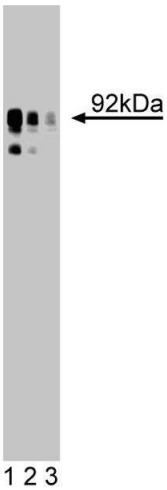
Zhao, Oxley, Smith, Follows, Green, Alexander: "DNA damage-induced Bcl-xL deamidation is mediated by NHE-1 antiport regulated intracellular pH." in: **PLoS biology**, Vol. 5, Issue 1, pp. e1, (2007) (PubMed).

Aharonovitz, Zaun, Balla, York, Orlowski, Grinstein: "Intracellular pH regulation by Na(+)/H(+) exchange requires phosphatidylinositol 4,5-bisphosphate." in: **The Journal of cell biology**, Vol. 150, Issue 1, pp. 213-24, (2000) (PubMed).

Cox, Lutz, Yang, Biemesderfer, Bronson, Fu, Aronson, Noebels, Frankel: "Sodium/hydrogen exchanger gene defect in slow-wave epilepsy mutant mice." in: **Cell**, Vol. 91, Issue 1, pp. 139-48, (1997) (PubMed).

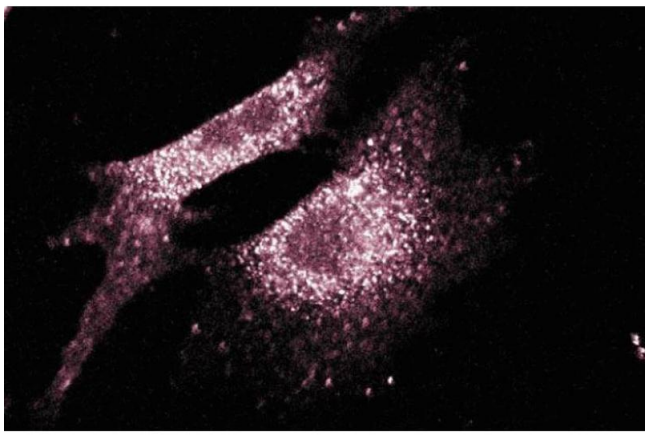
Kandasamy, Yu, Harris, Boucher, Hanrahan, Orlowski: "Plasma membrane Na+/H+ exchanger isoforms (NHE-1, -2, and -3) are differentially responsive to second messenger agonists of the protein kinase A and C pathways." in: **The Journal of biological chemistry**, Vol. 270, Issue 49, pp. 29209-16, (1996) (PubMed).

Orlowski, Kandasamy, Shull et al.: "Molecular cloning of putative members of the Na/H exchanger gene family. cDNA cloning, deduced amino acid sequence, and mRNA tissue expression of the rat Na/H exchanger NHE-1 and two structurally ..." in: **The Journal of biological chemistry**, Vol. 267, Issue 13, pp. 9331-9, (1992) (PubMed).



Western Blotting

Image 1. Western blot analysis for NHE on a HEK-293 cell lysate (Human embryonic kidney cells, ATCC CRL-1573). Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000 dilution of the Mouse Anti-NHE antibody.



Immunofluorescence

Image 2. Immunofluorescence staining of NIH/3T3 cells (Mouse embryo fibroblast cells, ATCC CRL-1658).