Anti-NHE-1 Antibody

ER1902-51

Product Type:	Rabbit polyclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IHC-P, IF-Cell, FC
Molecular Wt:	Predicted band size: 91/61 kDa.

Description: The sodium-hydrogen antiporter 1 (NHE-1) also known as sodium/hydrogen exchanger 1 or SLC9A1 (SoLute Carrier family 9A1) is an isoform of sodium–hydrogen antiporter that in humans is encoded by the SLC9A1 gene.The Na+/H+ antiporter (SLC9A1) is a ubiquitous membrane-bound enzyme involved in volume- and pH-regulation of vertebrate cells. It is inhibited by the non-specific diuretic drug amiloride and activated by a variety of signals including growth factors, mitogens, neurotransmitters, tumor promoters, and others.Sodium–hydrogen antiporter 1 has been shown to interact with carbonic anhydrase II and CHP. It is also the target of the experimental drug rimeporide, which is being developed for the treatment of Duchenne muscular dystrophy.

Immunogen: Synthetic peptide within mouse NHE-1 aa 36-85 / 820.

Positive control: Rat skin lysates, A431, 293T, LOVO, human kidney tissue, mouse colon tissue, human small intestine tissue.

Subcellular location: Cell membrane, Endoplasmic reticulum, Membrane.

Database links: SwissProt: P19634 Human | Q61165 Mouse | P26431 Rat

Recommended Dilutions:

WB	1:500-1:1000
IHC-P	1:50-1:200
IF-Cell	1:50-1:200
FC	1:50-1:100

Storage Buffer: 1*PBS (pH7.4), 0.2% BSA, 50% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.

Purity: Immunogen affinity purified.

Images

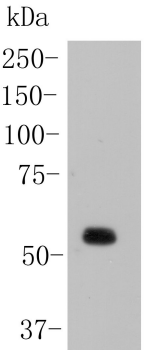

Fig1: Western blot analysis of NHE-1 on rat skin lysates. Proteins were transferred to a PVDF membrane and blocked with 5% BSA in PBS for 1 hour at room temperature. The primary antibody (ER1902-51, 1/1000) was used in 5% BSA at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:5,000 dilution was used for 1 hour at room temperature.

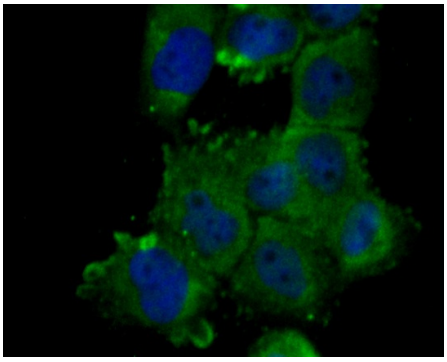

Fig2: ICC staining of NHE-1 in A431 cells (green). Formalin fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 10 minutes at room temperature and blocked with 1% Blocker BSA for 15 minutes at room temperature. Cells were probed with the primary antibody (ER1902-51, 1/100) for 1 hour at room temperature, washed with PBS. Alexa Fluor®488 Goat anti-Rabbit IgG was used as the secondary antibody at 1/100 dilution. The nuclear counter stain is DAPI (blue).

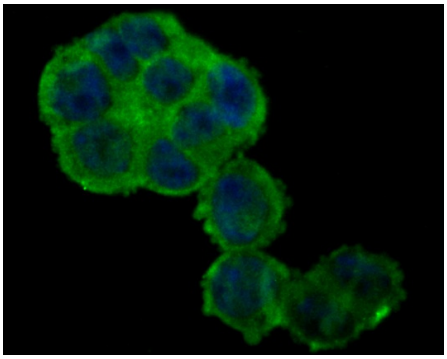

Fig3: ICC staining of NHE-1 in 293T cells (green). Formalin fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 10 minutes at room temperature and blocked with 1% Blocker BSA for 15 minutes at room temperature. Cells were probed with the primary antibody (ER1902-51, 1/100) for 1 hour at room temperature, washed with PBS. Alexa Fluor®488 Goat anti-Rabbit IgG was used as the secondary antibody at 1/100 dilution. The nuclear counter stain is DAPI (blue).

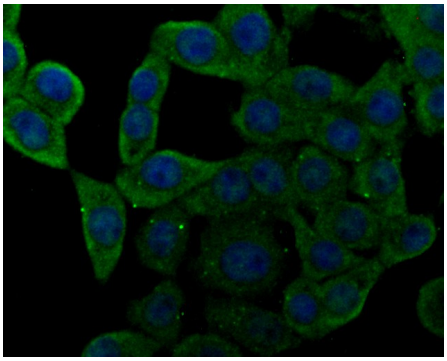

Fig4: ICC staining of NHE-1 in LOVO cells (green). Formalin fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 10 minutes at room temperature and blocked with 1% Blocker BSA for 15 minutes at room temperature. Cells were probed with the primary antibody (ER1902-51, 1/100) for 1 hour at room temperature, washed with PBS. Alexa Fluor®488 Goat anti-Rabbit IgG was used as the secondary antibody at 1/100 dilution. The nuclear counter stain is DAPI (blue).

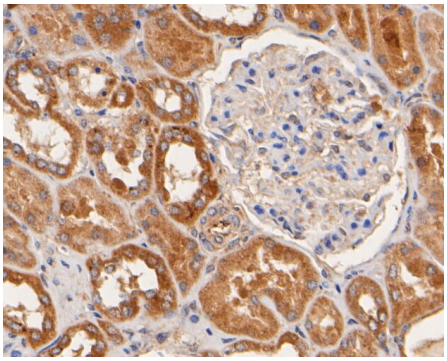

Fig5: Immunohistochemical analysis of paraffin-embedded human kidney tissue using anti-NHE-1 antibody. The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 8.0-8.4) for 20 minutes.The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ER1902-51, 1/50) for 30 minutes at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

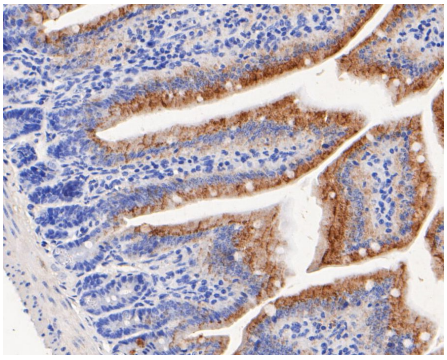

Fig6: Immunohistochemical analysis of paraffin-embedded mouse colon tissue using anti-NHE-1 antibody. The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 8.0-8.4) for 20 minutes.The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ER1902-51, 1/100) for 30 minutes at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

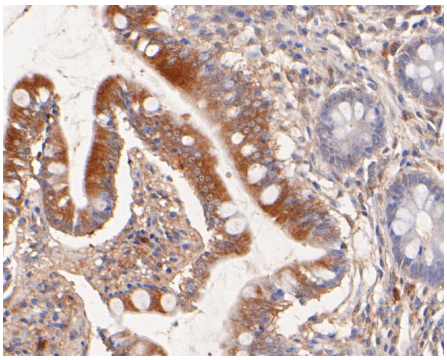

Fig7: Immunohistochemical analysis of paraffin-embedded human small intestine tissue using anti-NHE-1 antibody. The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 8.0-8.4) for 20 minutes.The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ER1902-51, 1/50) for 30 minutes at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

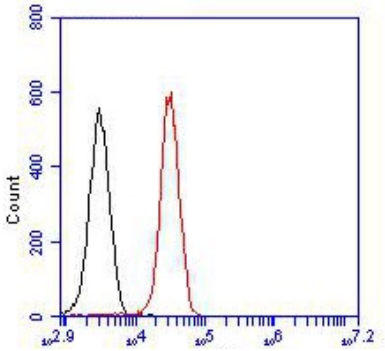

Fig8: Flow cytometric analysis of NHE-1 was done on 293T cells. The cells were fixed, permeabilized and stained with the primary antibody (ER1902-51, 1/100) (red). After incubation of the primary antibody at room temperature for an hour, the cells were stained with a Alexa Fluor 488-conjugated goat anti-rabbit IgG Secondary antibody at 1/500 dilution for 30 minutes.Unlabelled sample was used as a control (cells without incubation with primary antibody; black).

Background References

1. Lin X et al. A calcineurin homologous protein inhibits GTPase-stimulated Na-H exchange. Proc Natl Acad Sci USA 93:12631-12636 (1996).