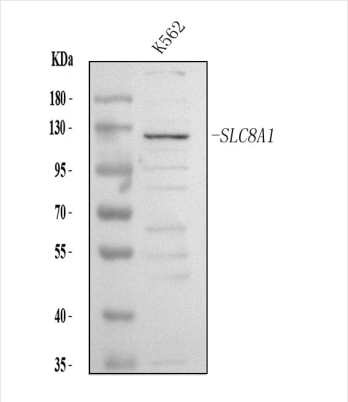
NCX1/SLC8A1 Antibody – Rabbit Polyclonal

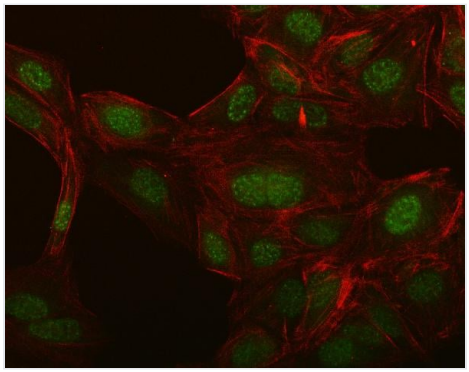
PRODUCT OVERVIEW

Product Name	NCX1/SLC8A1, Polyclonal Antibody
Full Product Name	Anti-NCX1/SLC8A1 Antibody Picoband
Product Gene Name	anti-NCX1/SLC8A1 antibody
Product Synonym Names	AF4/FMR2 family member 4; transient receptor potential cation channel subfamily V member 3; Transient receptor potential cation channel subfamily V member 3; TrpV3; Vanilloid receptor-like 3; VRL-3; TRPV3
Clonality	Polyclonal
Isotype	Rabbit IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Lyophilized. Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
Purity/Purification	Immunogen affinity purified.
Specificity	AbundantlyExpressed in CNS.Widely expressed at low levels. Detected in dorsal root ganglion.Expressed in the keratinocyte layers of the outer root sheath and, to lesser extent, to the matrix of the hair follicles.
Preparation and Storage	At -20 degree C for one year from date of receipt. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for six months.Avoid repeated freezing and thawing.
Molecular Weight	108,547 Da
Chromosome Location	Chromosome: 2; NC_000002.11 (40339286..40739575, complement). Location: 2p22.1
OMIM	182305
3D Structure	ModBase 3D Structure for P32418
Immunogen	E coli-derived human NCX1/SLC8A1 recombinant protein (Position: E301-Q686).
Subcellular Localization	Membrane. Multi-pass membrane protein
Reconstitution	Adding 0.2 ml of distilled water will yield a concentration of 500ug/ml.
Cross Reactivity	No cross-reactivity with other proteins.
Protein Function	Putative receptor-activated non-selective calcium permeant cation channel. It is activated by innocuous (warm) temperatures and shows an increased response at noxious temperatures greater than 39 degrees Celsius. Activation exhibits an outward rectification. May associate with TRPV1 and may modulate its activity. Is a negative regulator of hair growth and cycling: TRPV3-coupled signaling suppresses keratinocyte proliferation in hair follicles and induces apoptosis and premature hair follicle regression.
Product Categories/Family for anti-NCX1/SLC8A1 antibody	Primary Antibodies; Epigenetics and Nuclear Signaling; Transcription; Cell Biology; Transcription Factors; Cell Cycle
ISO Certification	Manufactured in an ISO 13485:2003 and EN ISO 13485:2012 Certified Laboratory.
Applications Tested/Suitable for anti-NCX1/SLC8A1 antibody	ELISA (EIA), Immunocytochemistry (ICC), Immunofluorescence (IF), Western Blot (WB)
Application Notes for anti-NCX1/SLC8A1 antibody	WB: 0.25-0.5ug/ml, Human ICC/IF: 5ug/ml, Human ELISA: 0.1-0.5ug/ml

Related Product Information for anti-NCX1/SLC8A1 antibody	The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Product References and Citations for anti-NCX1/SLC8A1 antibody	1. Ebert, A. M., Hume, G. L., Warren, K. S., Cook, N. P., Burns, C. G., Mohideen, M. A., Siegal, G., Yelon, D., Fishman, M. C., Garrity, D. M. Calcium extrusion is critical for cardiac morphogenesis and rhythm in embryonic zebrafish hearts. Proc. Nat. Acad. Sci. 102: 17705-17710, 2005.2. Hilge, M., Aelen, J., Vuister, G. W. Ca(2+) regulation in the Na(+)/Ca(2+) exchanger involves two markedly different Ca(2+) sensors. Molec. Cell 22: 15-25, 2006.3. Iwamoto, T., Kita, S., Zhang, J., Blaustein, M. P., Arai, Y., Yoshida, S., Wakimoto, K., Komuro, I., Katsuragi, T. Salt-sensitive hypertension is triggered by Ca(2+) entry via Na+/Ca+ exchanger type-1 in vascular smooth muscle. Nature Med. 10: 1193-1199, 2004.
Other Notes	Small volumes of anti-NCX1/SLC8A1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for NCX1/SLC8A1 purchase	MBS1758437 is an antibody targeting NCX1/SLC8A1. Also known as Anti-NCX1/SLC8A1 Antibody Picoband. Reactive in Human. Host: Rabbit.



Western Blot (WB) of anti-NCX1/SLC8A1 antibody
Figure 1. Western blot analysis of NCX1/SLC8A1 using anti-NCX1/SLC8A1 antibody (MBS1758437).Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel)/90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.Lane 1: human K562 whole cell lysates.After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-NCX1/SLC8A1 antigen affinity purified polyclonal antibody (#MBS1758437) at 0.5ug/mL overnight at 4 degree C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (#MBS176460) with Tanon 5200 system. A specific band was detected for NCX1/SLC8A1 at approximately 120 kDa. The expected band size for NCX1/SLC8A1 is at 120 kDa.



Immunofluorescence (IF) of anti-NCX1/SLC8A1 antibody
Figure 2. IF analysis of SLC8A1 using anti-SLC8A1 antibody (MBS1758437).SLC8A1 was detected in an immunocytochemical section of U2OS cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (#MBS176582) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5ug/mL rabbit anti-SLC8A1 Antibody (MBS1758437) overnight at 4 degree C. DyLight488 Conjugated Goat Anti-Rabbit IgG (MBS177405) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37 degree C. The tissue section was developed using Phalloidin-iFluor 594 Conjugated. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for NCX1/SLC8A1. It may not necessarily be applicable to this product.

NCBI GI #	1008973
NCBI GeneID	6546
NCBI Accession #	CAA62923.1
UniProt Primary Accession #	P32418
UniProt Secondary Accession #	O95849; Q4QQG6; Q587I6; Q59GN4; Q9UBL8; Q9UD55; Q9UDN1; Q9UDN2; Q9UKX6; A8K6N1; D6W595
UniProt Related Accession #	P32418
NCBI Official Full Name	Na+/Ca2+ exchanger
NCBI Official Synonym Full Names	solute carrier family 8 (sodium/calcium exchanger), member 1

NCBI Official Symbol	SLC8A1
NCBI Official Synonym Symbols	NCX1
UniProt Protein Name	Sodium/calcium exchanger 1
UniProt Synonym Protein Names	Na(+)/Ca(2+)-exchange protein 1
UniProt Gene Name	SLC8A1
UniProt Synonym Gene Names	CNC; NCX1
UniProt Entry Name	NAC1_HUMAN
NCBI Protein Information	sodium/calcium exchanger 1; Na+/Ca++ exchanger; Na+/Ca2+ exchanger; Na(+)/Ca(2+)-exchange protein 1
NCBI Summary for NCX1/SLC8A1	In cardiac myocytes, Ca(2+) concentrations alternate between high levels during contraction and low levels during relaxation. The increase in Ca(2+) concentration during contraction is primarily due to release of Ca(2+) from intracellular stores. However, some Ca(2+) also enters the cell through the sarcolemma (plasma membrane). During relaxation, Ca(2+) is sequestered within the intracellular stores. To prevent overloading of intracellular stores, the Ca(2+) that entered across the sarcolemma must be extruded from the cell. The Na(+)-Ca(2+) exchanger is the primary mechanism by which the Ca(2+) is extruded from the cell during relaxation. In the heart, the exchanger may play a key role in digitalis action. The exchanger is the dominant mechanism in returning the cardiac myocyte to its resting state following excitation.[supplied by OMIM, Apr 2004]
UniProt Comments for NCX1/SLC8A1	NCX1: Rapidly transports Ca(2+) during excitation-contraction coupling. Ca(2+) is extruded from the cell during relaxation so as to prevent overloading of intracellular stores. Belongs to the sodium/potassium/calcium exchanger family. SLC8 subfamily. 4 isoforms of the human protein are produced by alternative splicing. Protein type: Membrane protein, integral; Transporter; Motility/polarity/chemotaxis; Transporter, SLC family; Membrane protein, multi-pass Chromosomal Location of Human Ortholog: 2p22.1 Cellular Component: integral to plasma membrane; basolateral plasma membrane; T-tubule; plasma membrane; Z disc; sarcolemma Molecular Function: calmodulin binding; metal ion binding; cytoskeletal protein binding; ankyrin binding; calcium:sodium antiporter activity Biological Process: heart morphogenesis; cellular sodium ion homeostasis; embryonic placenta development; regulation of heart rate; vascular smooth muscle contraction; post-embryonic development; calcium ion homeostasis; cardiac muscle cell development; muscle contraction; reduction of cytosolic calcium ion concentration; embryonic heart tube development; ion transport; blood coagulation; muscle fiber development; transmembrane transport; regulation of the force of heart contraction; cardiac muscle contraction
Research Articles on NCX1/SLC8A1	**1.** these results demonstrate that REST, by regulating NCX1 expression, may represent a potential druggable target for the treatment of brain ischemia
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Product Note	Select online data sheet information is drawn from bioinformatics databases, occasionally resulting in ambiguous or non-relevant product information. It is the responsibility of the customer to review, verify, and evaluate the information to make sure it matches their requirements before purchasing the kit. Our ELISA Kit assays are dynamic research tools and sometimes they may be updated and improved. If the format of this assay is important to you then please request the current manual or contact our technical support team with a presales inquiry before placing an order. We will confirm the current details of the assay. We cannot guarantee the sample manual posted online is the most current manual, it is intended to serve as an example only. Please refer to the instructions For Use provided with the assay kit for precise details.

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