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Product datasheet for TA328915

Slc8a1 Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	IHC, WB
Recommended Dilution:	WB: 1:200-1:2000; IHC: 1:100-1:3000
Reactivity:	Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Peptide (C)EVDERDQDDEEAR, corresponding to amino acid residues 308-320 of rat NCX-1 . 3rdÂ intracellular 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% NaN3.
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 8 member A1
Database Link:	NP_062141 Entrez Gene 20541 MouseEntrez Gene 29715 Rat Q01728

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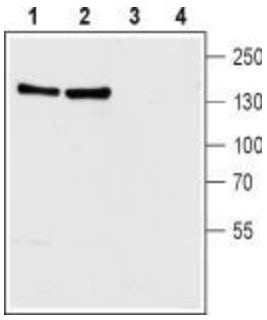
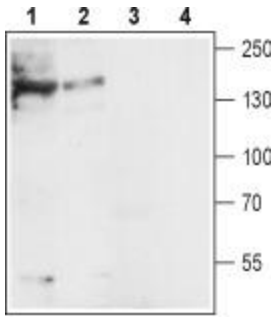
Background: Ca2+Â has proven to be a universal signaling molecule in excitable and non-excitable cells. However, being that its intracellular concentration is 1000 time lower than the extracellular milieu, it is important for the cell to keep this ratio for proper function. NCX, a Na+/Ca2+Â exchanger is responsible for most of the efflux of Ca2+Â out from the cell.The NCX transporter is a member of the SLC8 family of solute carriers which in turn belong to the CaCA superfamily.NCX-1 is one of three Na+/Ca2+ exchangers (NCX-1, NCX-2, NCX-3) leading to one Ca2+ movement across the plasma membrane in exchange of three Na+ influx. However, the transporter can reverse the direction of the transport if the concentrations of Na+ and Ca2+ change.The transporter has nine transmembrane domains and intracellular N- and C-terminals. Between tansmembrane domains 5 and 6, the presence of an extra-long intracellular loop, termed the f loop is responsible for regulating the activity of NCX-1 via several different mechanisms like ion binding, phosphorylation, etc. The f loop also has sites which undergo alternative splicing.Of the three NCX-1 expressed in mammalian cells, NCX-1 is the most widely expressed. Its expression is detected in the heart, brain, and kidney. NCX-1 undergoes alternative splicing in a tissue dependent manner. The first splice region does not change the overall structure of the protein but rather enables the expression of the gene specific to the tissues which require the expression of the gene. The second splicing site leads to a number of proteins varying in length. NCX-2 expression is much more limited; it is expressed only in neurons. NCX-3 is expressed in skeletal muscle and in some regions of the brain and undergoes alternative splicing in a similar fashion to that of NCX-1.Due to its central role in modulating Ca2+ levels in the cell, NCX-1 has become a pharmaceutical target in the development of drugs for various heart diseases and neurological disorders.

Synonyms: CNC; DKFZp779F0871; FLJ37694; FLJ43417; MGC119581; NCX1; OTTHUMP00000128378; OTTHUMP00000201569; OTTHUMP00000201570; OTTHUMP00000201587; OTTHUMP00000201589

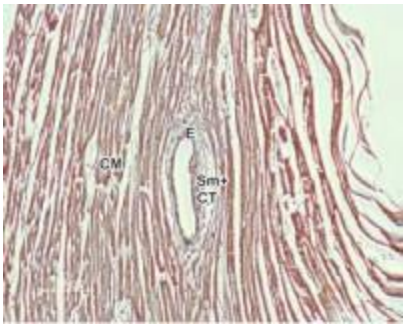
Product images:



Western blot analysis of rat (lanes 1 and 3) and mouse (lanes 2 and 4) brain membranes: 1, 2. Anti-Na+/Ca2+ Exchanger 1 (NCX-1) antibody, (1:200). 3, 4. Anti-Na+/Ca2+ Exchanger 1 (NCX-1) antibody, preincubated with the control peptide antigen.



Western blot analysis of mouse (lanes 1 and 3) and rat (lanes 2 and 4) heart lysates: 1, 2. Anti-Na+/Ca2+ Exchanger 1 (NCX-1) antibody, (1:200). 3, 4. Anti-Na+/Ca2+ Exchanger 1 (NCX-1) antibody, preincubated with the control peptide antigen.



Expression of NCX-1 in rat heart. Immunohistochemical staining of rat heart paraffin-embedded sections using Anti-Na+/Ca2+ Exchanger 1 (NCX-1) antibody, (1:100). Hematoxilin is used as the counterstain. NCX-1 labeling (brown) appears in the cardiac muscle cells (CM), and not in other parts of the tissue, such as the blood vessel endothelium (E), the connective tissue (CT) and smooth muscle (SM).