

SLC8A1 Antibody (Center) Blocking Peptide
Synthetic peptide
Catalog # BP8939c**Specification**

SLC8A1 Antibody (Center) Blocking Peptide - Product InformationPrimary Accession [P32418](#)**SLC8A1 Antibody (Center) Blocking Peptide - Additional Information****Gene ID** 6546**Other Names**

Sodium/calcium exchanger 1, Na(+)/Ca(2+)-exchange protein 1, Solute carrier family 8 member 1, SLC8A1, CNC, NCX1

Target/Specificity

The synthetic peptide sequence used to generate the antibody [AP8939c](/products/AP8939c) was selected from the Center region of human SLC8A1. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

SLC8A1 Antibody (Center) Blocking Peptide - Protein Information**Name** SLC8A1**Function**

Mediates the exchange of one Ca(2+) ion against three to four Na(+) ions across the cell membrane, and thereby contributes to the regulation of cytoplasmic Ca(2+) levels and Ca(2+)-dependent cellular processes (PubMed:[1374913](http://www.uniprot.org/citations/1374913), PubMed:[11241183](http://www.uniprot.org/citations/11241183), PubMed:[1476165](http://www.uniprot.org/citations/1476165)). Contributes to Ca(2+) transport during excitation-contraction coupling in muscle (PubMed:[1374913](http://www.uniprot.org/citations/1374913), PubMed:[11241183](http://www.uniprot.org/citations/11241183), PubMed:[1476165](http://www.uniprot.org/citations/1476165)). In a first phase, voltage-gated channels mediate the rapid increase of cytoplasmic Ca(2+) levels due to release of

Ca(2+) stores from the endoplasmic reticulum (PubMed:1374913, PubMed:11241183, PubMed:1476165). SLC8A1 mediates the export of Ca(2+) from the cell during the next phase, so that cytoplasmic Ca(2+) levels rapidly return to baseline (PubMed:1374913, PubMed:11241183, PubMed:1476165). Required for normal embryonic heart development and the onset of heart contractions (By similarity).

Cellular Location

Cell membrane; Multi-pass membrane protein

Tissue Location

Detected primarily in heart and at lower levels in brain (PubMed:1374913). Expressed in cardiac sarcolemma, brain, kidney, liver, pancreas, skeletal muscle, placenta and lung (PubMed:1476165)

SLC8A1 Antibody (Center) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

SLC8A1 Antibody (Center) Blocking Peptide - Images

SLC8A1 Antibody (Center) Blocking Peptide - Background

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.

SLC8A1 Antibody (Center) Blocking Peptide - References

Palty,R., et.al., Proc. Natl. Acad. Sci. U.S.A. 107 (1), 436-441 (2010)Kepp,K., et.al., BMC Med. Genet. 11, 15 (2010)