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SLC8A1 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP8939C

Specification

SLC8A1 Antibody (Center) - Product Information

Application	**WB, IHC-P, FC,E**
Primary Accession	P32418
Other Accession	Q01728, P70414, P48765
Reactivity	**Human, Mouse**
Predicted	**Bovine, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**108547**
Antigen Region	**296-325**

SLC8A1 Antibody (Center) - 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
This SLC8A1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 296-325 amino acids from the Central region of human SLC8A1.

Dilution
WB~~1:1000
IHC-P~~1:10~50
FC~~1:10~50

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
SLC8A1 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

SLC8A1 Antibody (Center) - Protein Information

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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:11241183, PubMed:1374913, PubMed:1476165). Contributes to Ca(2+) transport during excitation-contraction coupling in muscle (PubMed:11241183, PubMed:1374913, PubMed: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:11241183, PubMed:1374913, 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:11241183, PubMed:1374913, PubMed:1476165). Required for normal embryonic heart development and the onset of heart contractions (By similarity).

Cellular Location
Cell membrane; Multi-pass membrane protein

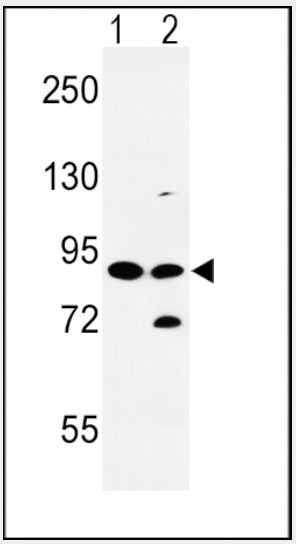
Tissue Location
Detected primarily in heart and at lower levels in brain (PubMed:1374913). Expressed in cardiac sarcolemma, brain, kidney, liver, pancreas, skeletal muscle, placenta and lung (PubMed:1476165)

SLC8A1 Antibody (Center) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

SLC8A1 Antibody (Center) - Images



Western blot analysis of SLC8A1 Antibody (Center) (Cat. #AP8939c) in HL-60(lane 1), K562(lane

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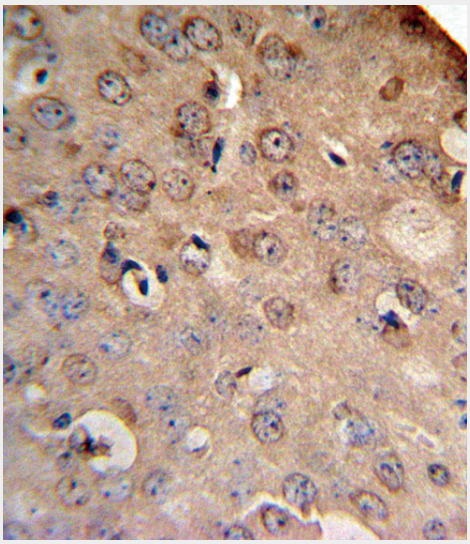
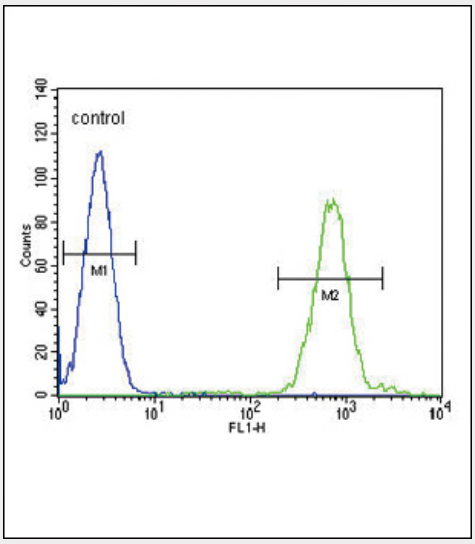
2) cell line lysates (35ug/lane). SLC8A1 (arrow) was detected using the purified Pab.



SLC8A1 Antibody (Center) (Cat. #AP8939c) IHC analysis in formalin fixed and paraffin embedded mouse brain followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the SLC8A1 Antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.



SLC8A1 Antibody (Center) (Cat. #AP8939c) flow cytometric analysis of HL-60 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

SLC8A1 Antibody (Center) - Background

In cardiac myocytes, Ca(2+) concentrations alternate between high levels during contraction and low levels during relaxation. The increase in Ca(2+) centration 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.

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SLC8A1 Antibody (Center) - 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)