

**SLC8A3 Antibody (C-term)**  
**Affinity Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP12808b****Specification**

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**SLC8A3 Antibody (C-term) - Product Information**

Application	WB, IHC-P,E
Primary Accession	<a href="#">P57103</a>
Other Accession	<a href="#">NP_892114.1</a>
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Antigen Region	585-614

**SLC8A3 Antibody (C-term) - Additional Information****Gene ID** 6547**Other Names**

Sodium/calcium exchanger 3, Na(+)/Ca(2+)-exchange protein 3, Solute carrier family 8 member 3, SLC8A3, NCX3

**Target/Specificity**

This SLC8A3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 585-614 amino acids of human SLC8A3.

**Dilution**

WB~~1:1000

IHC-P~~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**

SLC8A3 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

**SLC8A3 Antibody (C-term) - Protein Information****Name** SLC8A3**Synonyms** NCX3

**Function** Mediates the electrogenic exchange of  $\text{Ca}^{2+}$  against  $\text{Na}^{+}$  ions across the cell membrane, and thereby contributes to the regulation of cytoplasmic  $\text{Ca}^{2+}$  levels and  $\text{Ca}^{2+}$ -dependent cellular processes. Contributes to cellular  $\text{Ca}^{2+}$  homeostasis in excitable cells, both in muscle and in brain. In a first phase, voltage-gated channels mediate the rapid increase of cytoplasmic  $\text{Ca}^{2+}$  levels due to release of  $\text{Ca}^{2+}$  stores from the endoplasmic reticulum. SLC8A3 mediates the export of  $\text{Ca}^{2+}$  from the cell during the next phase, so that cytoplasmic  $\text{Ca}^{2+}$  levels rapidly return to baseline. Contributes to  $\text{Ca}^{2+}$  transport during excitation-contraction coupling in muscle. In neurons, contributes to the rapid decrease of cytoplasmic  $\text{Ca}^{2+}$  levels back to baseline after neuronal activation, and thereby contributes to modulate synaptic plasticity, learning and memory (By similarity). Required for normal oligodendrocyte differentiation and for normal myelination (PubMed:21959935). Mediates  $\text{Ca}^{2+}$  efflux from mitochondria and contributes to mitochondrial  $\text{Ca}^{2+}$  ion homeostasis (By similarity).

#### Cellular Location

Cell membrane; Multi-pass membrane protein. Perikaryon {ECO:0000250|UniProtKB:P70549}. Cell projection, dendrite {ECO:0000250|UniProtKB:P70549}. Cell projection, dendritic spine {ECO:0000250|UniProtKB:P70549}. Cell membrane, sarcolemma {ECO:0000250|UniProtKB:S4R2P9}. Cytoplasm, sarcoplasm {ECO:0000250|UniProtKB:S4R2P9}. Cell junction {ECO:0000250|UniProtKB:S4R2P9}. Mitochondrion outer membrane {ECO:0000250|UniProtKB:S4R2P9}; Multi-pass membrane protein {ECO:0000250|UniProtKB:S4R2P9}. Cytoplasm, perinuclear region. Endoplasmic reticulum membrane; Multi-pass membrane protein {ECO:0000250|UniProtKB:S4R2P9}. Note=Detected at neuromuscular junctions. {ECO:0000250|UniProtKB:S4R2P9}

#### Tissue Location

Isoform 2 is expressed in brain and skeletal muscle. Isoform 3 is expressed in excitable cells of brain, retina and skeletal muscle. Isoform 4 is expressed in skeletal muscle

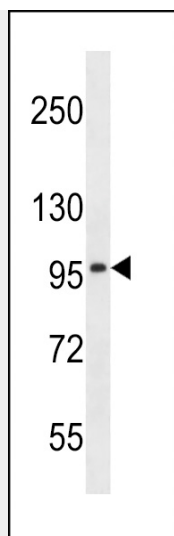
#### SLC8A3 Antibody (C-term) - Protocols

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

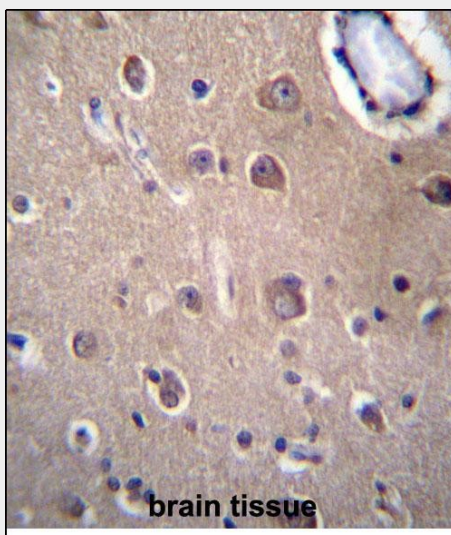
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### SLC8A3 Antibody (C-term) - Images





SLC8A3 Antibody (C-term) (Cat. #AP12808b) western blot analysis in NCI-H460 cell line lysates (35ug/lane). This demonstrates the SLC8A3 antibody detected the SLC8A3 protein (arrow).



SLC8A3 Antibdy (C-term) (Cat. #AP12808b) immunohistochemistry analysis in formalin fixed and paraffin embedded human brain tissue followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of SLC8A3 Antibdy (C-term) for immunohistochemistry. Clinical relevance has not been evaluated.

### **SLC8A3 Antibody (C-term) - Background**

This gene encodes a member of the sodium/calcium exchanger integral membrane protein family. Three mammalian isoforms in family 8 have been identified.  $\text{Na}^+/\text{Ca}^{2+}$  exchange proteins are involved in maintaining  $\text{Ca}^{2+}$  homeostasis in a wide variety of cell types. The protein is regulated by intracellular calcium ions and is found in both the plasma membrane and intracellular organellar membranes, where exchange of  $\text{Na}^+$  for  $\text{Ca}^{2+}$  occurs in an electrogenic manner. Alternative splicing has been observed for this gene and multiple variants have been described.

### **SLC8A3 Antibody (C-term) - References**

Rose, J.E., et al. Mol. Med. 16 (7-8), 247-253 (2010) :  
Pulina, M.V., et al. J. Biol. Chem. 281(28):19645-19654(2006)  
Gomez-Villafuertes, R., et al. J. Neurosci. 25(47):10822-10830(2005)  
Lindgren, R.M., et al. Gene 348, 143-155 (2005) :  
Gabellini, N. Mol. Neurobiol. 30(1):91-116(2004)

**SLC8A3 Antibody (C-term) - Citations**

- [Na Exchange and Pacemaker Activity of Interstitial Cells of Cajal](#)