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SLC8A3 Antibody (C-term) Blocking peptide

Synthetic peptide
Catalog # BP12808b

Specification

SLC8A3 Antibody (C-term) Blocking peptide - Product Information

Primary Accession	P57103

SLC8A3 Antibody (C-term) Blocking peptide - 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

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.

SLC8A3 Antibody (C-term) Blocking peptide - Protein Information

Name SLC8A3

Synonyms NCX3

Function
Mediates the electrogenic exchange of Ca(2+) against Na(+) ions across the cell membrane, and thereby contributes to the regulation of cytoplasmic Ca(2+) levels and Ca(2+)-dependent cellular processes. Contributes to cellular 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 Ca(2+) levels due to release of Ca(2+) stores from the endoplasmic reticulum. SLC8A3 mediates the export of Ca(2+) from the cell during the next phase, so that cytoplasmic Ca(2+) levels rapidly return to baseline. Contributes to Ca(2+) transport during excitation-contraction coupling in muscle. In neurons, contributes to the rapid decrease of cytoplasmic 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 Ca(2+) efflux from mitochondria and contributes to mitochondrial 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) Blocking peptide - Protocols

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

- Blocking Peptides

SLC8A3 Antibody (C-term) Blocking peptide - Images

SLC8A3 Antibody (C-term) Blocking peptide - Background

This gene encodes a member of the sodium/calcium exchangerintegral membrane protein family. Three mammalian isoforms infamily 8 have been identified. Na+/Ca2+ exchange proteins areinvolved in maintaining Ca2+ homeostasis in a wide variety of celltypes. The protein is regulated by intracellular calcium ions andis found in both the plasma membrane and intracellular organellarmembranes, where exchange of Na+ for Ca2+ occurs in an electrogenicmanner. Alternative splicing has been observed for this gene andmultiple variants have been described.

SLC8A3 Antibody (C-term) Blocking peptide - 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)