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SLC8A3 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP12808b

Product Information

Application	WB, IHC-P, E
Primary Accession	P57103
Other Accession	NP_892114.1
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB32328
Calculated MW	103010
Antigen Region	585-614

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~~1:100~500 E~~Use at an assay dependent concentration.
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.

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

Background

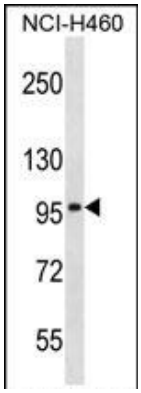
This gene encodes a member of the sodium/calcium exchanger integral membrane protein family. Three mammalian isoforms in family 8 have been identified. Na+/Ca2+ exchange proteins are involved in maintaining Ca2+ homeostasis in a wide variety of cell types. The protein is regulated by intracellular calcium ions and is found in both the plasma membrane and intracellular organellar membranes, where exchange of Na+ for Ca2+ occurs in an electrogenic manner. Alternative splicing has been observed for this gene and multiple variants have been described.

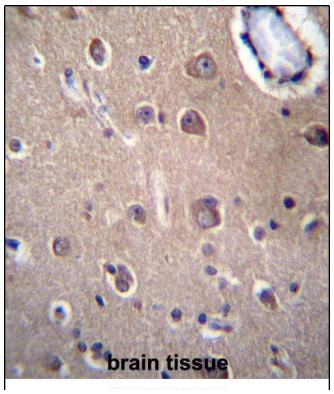
References

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)

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.

Citations

- Na Exchange and Pacemaker Activity of Interstitial Cells of Cajal