ASIC1 Human Protein

PRODUCT OVERVIEW

Product Name	ASIC1, Protein
Full Product Name	Human ASIC1 full length protein-synthetic nanodisc
Product Gene Name	ASIC1 protein
Product Synonym Names	ACCN2; ASIC; BNaC2
Host	HEK293
Form/Format	Lyophilized from nanodisc solubilization buffer (20 mM Tris-HCl, 150 mM NaCl, pH 8.0). Normally 5%-8% trehalose is added as protectants before lyophilization. Please see Certificate of Analysis for specific instructions. Do not use solvents with pH lower
Preparation and Storage	Store at -20 degree C to -80 degree C for 12 months in lyophilized form. After reconstitution, if not intended for use within a month, aliquot and store at -80 degree C (Avoid repeated freezing and thawing). Lyophilized proteins are shipped at ambient temperature.
Molecular Weight	62,700 Da
OMIM	602866
3D Structure	ModBase 3D Structure for P78348
Tag	C-DYKDDDDK
Product Categories/Family for ASIC1 protein	Full Length Transmembrane Proteins; Ion Channels: Other
Related Product Information for ASIC1 protein	This gene encodes a member of the acid-sensing ion channel (ASIC) family of proteins, which are part of the degenerin/epithelial sodium channel (DEG/ENaC) superfamily. Members of the ASIC family are sensitive to amiloride and function in neurotransmission. The encoded proteins function in learning, pain transduction, touch sensation, and development of memory and fear. Alternatively spliced transcript variants have been described. [provided by RefSeq, Feb 2012]
Other Notes	Small volumes of ASIC1 protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for ASIC1 purchase	MBS1882947 is a protein targeting ASIC1. Also known as Human ASIC1 full length protein-synthetic nanodisc. Host: HEK293.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for ASIC1. It may not necessarily be applicable to this product.

NCBI GI #	378744190
NCBI GeneID	41
NCBI Accession #	NP_001243759.1
UniProt Primary Accession #	P78348
UniProt Secondary Accession #	P78349; Q96CV2; A3KN86; E5KBL7
UniProt Related Accession #	P78348
GenBank Nucleotide #	NM_001256830.1

NCBI Official Full Name	acid-sensing ion channel 1 isoform c
NCBI Official Synonym Full Names	acid sensing ion channel subunit 1
NCBI Official Symbol	ASIC1
NCBI Official Synonym Symbols	ASIC; ACCN2; BNaC2
UniProt Protein Name	Acid-sensing ion channel 1
UniProt Synonym Protein Names	Amiloride-sensitive cation channel 2, neuronal; Brain sodium channel 2
Protein Family	Acid-sensing ion channel
UniProt Gene Name	ASIC1
UniProt Synonym Gene Names	ACCN2; BNAC2; ASIC1; BNaC2
UniProt Entry Name	ASIC1_HUMAN
NCBI Protein Information	acid-sensing ion channel 1
UniProt Comments for ASIC1	Function: Cation channel with high affinity for sodium, which is gated by extracellular protons and inhibited by the diuretic amiloride. Also permeable for Ca2+, Li+ and K+. Generates a biphasic current with a fast inactivating and a slow sustained phase. Mediates glutamate-independent Ca2+ entry into neurons upon acidosis. This Ca2+ overloading is toxic for cortical neurons and may be in part responsible for ischemic brain injury. Heteromeric channel assembly seems to modulate channel properties. Functions as a postsynaptic proton receptor that influences intracellular Ca2+ concentration and calmodulin-dependent protein kinase II phosphorylation and thereby the density of dendritic spines. Modulates activity in the circuits underlying innate fear By similarity. Subunit structure: Homotrimer or heterotrimer with other ASIC proteins By similarity. Interacts with STOM and ASIC2 By similarity. Interacts with PRKCABP. Ref.8 Ref.10 Subcellular location: Cell membrane; Multi-pass membrane protein By similarity. Note: Localizes in synaptosomes at dendritic synapses of neurons. Colocalizes with DLG4 By similarity. Ref.10 Tissue specificity: Expressed in most or all neurons. Post-translational modification: Phosphorylation by PKA regulates interaction with PRKCABP and subcellular location. Phosphorylation by PKC may regulate the channel. Miscellaneous: Potentiated by Ca2+, Mg2+, Ba2+ and multivalent cations. Inhibited by anti-inflammatory drugs like salicylic acid By similarity. Potentiated by FMRFamide-related neuropeptides. PH dependence may be regulated by serine proteases. Sequence similarities: Belongs to the amiloride-sensitive sodium channel (TC 1.A.6) family. ASIC1 subfamily. [View classification]
Research Articles on ASIC1	**1.** analysis of a major ASIC1a homotetramer at the surface membrane of the cell expressing functional ASIC1a channel
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