

Datasheet for ABIN3137658

SLC8A3 Protein (AA 252-727) (His tag)



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1 Image

Overview

Quantity:	1 mg
Target:	SLC8A3
Protein Characteristics:	AA 252-727
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This SLC8A3 protein is labelled with His tag.
Application:	ELISA, Western Blotting (WB), Crystallization (Crys), SDS-PAGE (SDS)

Product Details

Sequence: DKRLLFYKYM HKKYRTDKHR GIIETEGDH PKGIEMDGKM MNSHFLDGNF TPLEGKEVDE
SRREMIRILK DLKQKHPEKD LDQLVEMANY YALSHQQKSR AFYRIQATRM MTGAGNILKK
HAAEQAKKTS SMSEVHTDEP EDFASKVFFD PCSYQCLENC GAVLLTVVRK GGDISKTMVY
DYKTEDGSAN AGADYEFTEG TVVLKPGETQ KEFSVGIIDD DIFEEDHEFF VRLSNVRVEE
EQLAEGMLPA ILNSLPLPRA VLASPCVATV TILDDDHAGI FTFECDTIHV SESIGVMEVK
VLRTSGARGT VIVPFRTEG TAKGGGEDFE DAYGELEFKN DETVKTIHIK VIDDKAYEKN
KNYVIEMMGP RMVDMSVQKA LLLSPEVTDR KLTVEEEEAK RIAEMGKPVL GEHPKLEVII
EESYEFKSTV DKLIKKTNLA LVVGTHSWRD QFMEAITVSA GGDEDEDESG EERLPS

Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a special request, please contact us.

Characteristics:

- Made in Germany - from design to production - by highly experienced protein experts.
- Mouse Slc8a3 Protein (raised in Insect Cells) purified by multi-step, protein-specific process

Product Details

to ensure crystallization grade.

- State-of-the-art algorithm used for plasmid design (Gene synthesis).

This protein is a made to order protein and will be made for the first time for your order. Our experts in the lab will ensure that you receive a correctly folded protein.

The big advantage of ordering our made-to-order proteins in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.

In the unlikely event that the protein cannot be expressed or purified we do not charge anything (other companies might charge you for any performed steps in the expression process for custom-made proteins, e.g. fees might apply for the expression plasmid, the first expression experiments or purification optimization).

When you order this made-to-order protein you will only pay upon receipt of the correctly folded protein. With no financial risk on your end you can rest assured that our experienced protein experts will do everything to make sure that you receive the protein you ordered.

The concentration of our recombinant proteins is measured using the absorbance at 280nm. The protein's absorbance will be measured in several dilutions and is measured against its specific reference buffer.

The concentration of the protein is calculated using its specific absorption coefficient. We use the Expasy's protparam tool to determine the absorption coefficient of each protein.

Purification:	Two step purification of proteins expressed in baculovirus infected SF9 insect cells: <ol style="list-style-type: none">1. In a first purification step, the protein is purified from the cleared cell lysate using three different His-tag capture materials: high yield, EDTA resistant, or DTT resistant. Eluate fractions are analyzed by SDS-PAGE.2. Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatography. Eluate fractions are analyzed by SDS-PAGE and Western blot.
Purity:	>95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.
Sterility:	0.22 µm filtered
Endotoxin Level:	Protein is endotoxin free.
Grade:	Crystallography grade

Target Details

Target:	SLC8A3
Alternative Name:	Slc8a3 (SLC8A3 Products)

Target Details

Background: 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 (PubMed:14722618, PubMed:21593315). 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 (PubMed:14722618, PubMed:21593315). Contributes to Ca(2+) transport during excitation-contraction coupling in muscle (PubMed:14722618). 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 (PubMed:21593315). 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 (PubMed:24616101). Isoform 1 displays higher calcium exchanger activity than isoform 2, probably because isoform 1 has a lower threshold for activation by cytoplasmic Ca(2+) (PubMed:24616101). {ECO:0000269|PubMed:14722618, ECO:0000269|PubMed:21593315, ECO:0000269|PubMed:21959935, ECO:0000269|PubMed:24616101}.

Molecular Weight: 54.6 kDa Including tag.

UniProt: [S4R2P9](#)

Application Details

Application Notes: In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.

Comment: Protein has not been tested for activity yet. In cases in which it is highly likely that the recombinant protein with the default tag will be insoluble our protein lab may suggest a higher molecular weight tag (e.g. GST-tag) instead to increase solubility. We will discuss all possible options with you in detail to assure that you receive your protein of interest.

Restrictions: For Research Use only

Handling

Format: Liquid

Buffer: 100 mM NaCl, 20 mM Hepes, 10% glycerol. pH value is at the discretion of the manufacturer.

Handling

Handling Advice: Avoid repeated freeze-thaw cycles.

Storage: -80 °C

Storage Comment: Store at -80°C.

Expiry Date: Unlimited (if stored properly)

Images



Image 1. „Crystallography Grade“ protein due to multi-step, protein-specific purification process