

Datasheet for ABIN3137659  
**SLC8A3 Protein (AA 31-928) (rho-1D4 tag)**



[Go to Product page](#)

1 Image

Overview

|                               |  |
|-------------------------------|--|
| Quantity:                     | 1 mg   |
| Target:                       | SLC8A3   |
| Protein Characteristics:      | AA 31-928  |
| Origin:                       | Mouse  |
| Source:                       | Insect Cells   |
| Protein Type:                 | Recombinant  |
| Purification tag / Conjugate: | This SLC8A3 protein is labelled with rho-1D4 tag.                    |
| Application:                  | ELISA, Western Blotting (WB), Crystallization (Crys), SDS-PAGE (SDS) |

Product Details

|           |  |
|-----------|--|
| Sequence: | <p>EAGDSGDVPS AGQNNESCSG SSDCKEGVIL PIWYPENPSL GDKIARVIVY FVALIYMFLG<br/> VSIADRMA SIEVITSQER EVTIKKPNGE TSTTTIRVWN ETVSNLTLMA LGSSAPEILL<br/> SLIEVCGHGF IAGDLGPSTI VGSAAFNMFI IIGICVYVIP DGETRKHHL RVFFVTAAWS IFAYIWLMI<br/> LAVFSPGVVQ VWEGLLTLFF FPVCVLLAWV ADKRLLFYKY MHKKYRTDKH RGIIEGEGD<br/> HPKGIEMDGK MMNSHFLDGN FTPLEGKEVD ESRREMIRIL KDLKQKHPEK DLDQLVEMAN<br/> YYALSHQKKS RAFYRIQATR MMTGAGNILK KHAAEQAKKT SSMSEVHTDE PEDFASKVFF<br/> DPCSYQCLEN CGAVLLTVVR KGGDISKTMY VDYKTEDGSA NAGADYEFTE GTVVLKPGET<br/> QKEFSVGIID DDIFEDEHF FVRLSNVRVE EEQLAEGMLP AILNSLPLPR AVLASPCVAT<br/> VTILDDDHAG IFTFECDTIH VSESIGVMEV KVLRTSGARG TVIVPFRTVE GTAKGGGEDF<br/> EDAYGELEFK NDETVKTIHI KVIDDKAYEK NKNYVIEMMG PRMVDMSVQK ALLLSPEVTD<br/> RKLTVEEEEA KRIAEMGKPV LGEHPKLEVI IEESYEFKST VDKLIKKTNL ALVVGTHSWR<br/> DQFMEAITVS AGGDEDEDES GEERLPSCFD YVMHFLTVFW KVLFACVPPT EYCHGWACFV</p> |
|-----------|--|

VSILIIGMLT AIIGDLASHF GCTIGLKDSV TAVVFVAFGT SVPDTFASKA AALQDVYADA  
SIGNVTGSNA VNVFLGIGLA WSVAAIYWAM QQQEFHVSAG TLAFSVTLFT IFAFVCLSVL  
LYRRRPHLGG ELGGPRGCKL ATTWLFVSLW LLYILFATLE AYCYIKGF

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

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### 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 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.

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### Purification:

Three step purification of membrane proteins expressed in baculovirus infected SF9 insect cells:

1. Membrane proteins are fractionated by ultracentrifugation and subsequently solubilized with different detergents (detergent screen). Samples are analyzed by Western blot.
2. The best performing detergent is used for solubilization and the proteins are purified via their rho1D4 tag via two rho1D4 antibody columns: one DTT resistant, the other one not. Eluate fractions are analyzed by Western blot.
3. Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatograph. Eluate fractions are analyzed by SDS-PAGE and Western blot.

## Product Details

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|                  |  |
|------------------|--|
| 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

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|                   |  |
|-------------------|--|
| Target:           | SLC8A3   |
| Alternative Name: | Slc8a3 ( <a href="#">SLC8A3 Products</a> )   |
| Background:       | <p>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}.</p> |
| Molecular Weight: | 100.7 kDa Including tag.   |
| UniProt:          | <a href="#">S4R2P9</a>   |

## Application Details

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| 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. |
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## Application Details

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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.

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Restrictions: For Research Use only

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## Handling

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Format: Liquid

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

Handling Advice: Avoid repeated freeze-thaw cycles.

Storage: -80 °C

Storage Comment: Store at -80°C.

Expiry Date: Unlimited (if stored properly)

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## Images

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