Datasheet for ABIN7555470

# SLC3A1 Protein (AA 1-685) (His tag)

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## Overview

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| Quantity: | 1 mg |
| Target: | SLC3A1 |
| Protein Characteristics: | AA 1-685 |
| Origin: | Human |
| Source: | HEK-293 Cells |
| Protein Type: | Recombinant |
| Purification tag / Conjugate: | This SLC3A1 protein is labelled with His tag. |

## Product Details

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| Purpose: | Custom-made recombinant SLC3A1 Protein expressed in mammalian cells. |
| Sequence: | MAEDKSKRDS IEMSMKGCQT NNGFVHNEDI LEQTPDPGSS TDNLKHSTRG ILGSQEPDFK GVQPYAGMPK EVLFQFSGQA RYRIPREILF WLTVASVLVL IAATIAIIAL SPKCLDWWQE GPMYQIYPRS FKDSNKDGNG DLKGIQDKLD YITALNIKTV WITSFYKSSL KDFRYGVEDF REVDPIFGTM EDFENLVAAI HDKGLKLIID FIPNHTSDKH IWFQLSRTRT GKYTDYYIWH DCTHENGKTI PPNNWLSVYG NSSWHFDEVR NQCYFHQFMK EQPDLNFRNP DVQEEIKEIL RFWLTKGVDG FSLDAVKFLL EAKHLRDEIQ VNKTQIPDTV TQYSELYHDF TTTQVGMHDI VRSFRQTMDQ YSTEPGRYRF MGTEAYAESI DRTVMYYGLP FIQEADFPFN NYLSMLDTVS GNSVYEVITS WMENMPEGKW PNWMIGGPDS SRLTSRLGNQ YVNVMNMLLF TLPGTPITYY GEEIGMGNIV AANLNESYDI NTLRSKSPMQ WDNSSNAGFS EASNTWLPTN SDYHTVNVDV QKTQPRSALK LYQDLSLLHA NELLLNRGWF CHLRNDSHYV VYTRELDGID RIFIVVLNFG ESTLLNLHNM ISGLPAKMRI RLSTNSADKG SKVDTSGIFL DKGEGLIFEH NTKNLLHRQT AFRDRCFVSN RACYSSVLNI LYTSC **Sequence without tag. The proposed Purification-Tag is** |

## Product Details

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| | **based on experiences with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.** |
| Specificity: | If you are looking for a specific domain and are interested in a partial protein or a different isoform, please contact us regarding an individual offer. |
| Characteristics: | Key Benefits:<br>• Made to order protein - from design to production - by highly experienced protein experts.<br>• Protein expressed in mammalian cells and purified in one-step affinity chromatography<br>• The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins.<br>• State-of-the-art algorithm used for plasmid design (Gene synthesis).<br><br>This protein is a made-to-order protein and will be made for the first time for your order. Our experts in the lab try to ensure that you receive soluble protein.<br><br>If you are not interested in a full length protein, please contact us for individual protein fragments.<br><br>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. |
| Purity: | > 90 % as determined by Bis-Tris PAGE, anti-tag ELISA, Western Blot and analytical SEC (HPLC) |
| Grade: | custom-made |

## Target Details

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| Target: | SLC3A1 |
| Alternative Name: | SLC3A1 (SLC3A1 Products) |
| Background: | Amino acid transporter heavy chain SLC3A1 (D2h) (Neutral and basic amino acid transport protein) (NBAT) (Solute carrier family 3 member 1) (b(0,+)-type amino acid transporter-related heavy chain) (rBAT),FUNCTION: Acts as a chaperone that facilitates biogenesis and trafficking of functional transporter heteromers to the plasma membrane (PubMed:16825196, PubMed:10588648, PubMed:32817565, PubMed:32494597, PubMed:11318953, PubMed:16609684, PubMed:8486766, PubMed:7686906, PubMed:8663184, PubMed:8663357) (By similarity). Associates with SLC7A9 to form a functional transporter complex that mediates the electrogenic exchange between cationic amino acids and neutral amino acids, with a stoichiometry of 1:1. SLC7A9-SLC3A1 transporter has system b(0,+)-like activity with high |

## Target Details

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| | affinity for extracellular cationic amino acids and L-cystine and lower affinity for intracellular neutral amino acids. Substrate exchange is driven by high concentration of intracellular neutral amino acids and the intracellular reduction of L-cystine to L-cysteine. SLC7A9-SLC3A1 acts as a major transporter for reabsorption of L-cystine and dibasic amino acids across the brush border membrane in early proximal tubules (PubMed:10588648, PubMed:11318953, PubMed:16609684, PubMed:16825196, PubMed:32494597, PubMed:32817565, PubMed:7686906, PubMed:8486766, PubMed:8663184, PubMed:8663357). Associates with SLC7A13 to form a functional complex that transports anionic and neutral amino acids via exchange or facilitated diffusion. SLC7A13-SLC3A1 may act as a major transporter for L-cystine in late proximal tubules, ensuring its reabsorption from the luminal fluid in exchange for cytosolic L-glutamate or L-aspartate (By similarity). {ECO:0000250\|UniProtKB:Q91WV7, ECO:0000269\|PubMed:10588648, ECO:0000269\|PubMed:11318953, ECO:0000269\|PubMed:16609684, ECO:0000269\|PubMed:16825196, ECO:0000269\|PubMed:32494597, ECO:0000269\|PubMed:32817565, ECO:0000269\|PubMed:7686906, ECO:0000269\|PubMed:8486766, ECO:0000269\|PubMed:8663184, ECO:0000269\|PubMed:8663357}. |
| Molecular Weight: | 78.9 kDa |
| UniProt: | Q07837 |

## Application Details

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| Application Notes: | We expect the protein to work for functional studies. As the protein has not been tested for functional studies yet we cannot offer a guarantee though. |
| Restrictions: | For Research Use only |

## Handling

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| Format: | Liquid |
| Buffer: | The buffer composition 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: | 12 months |