Datasheet for ABIN7546652

SLC31A1 Protein (AA 1-190) (His tag)

Go to Product page

Overview

Quantity:	1 mg
Target:	SLC31A1
Protein Characteristics:	AA 1-190
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This SLC31A1 protein is labelled with His tag.

Product Details

Purpose:	Custom-made recombinant SLC31A1 Protein expressed in mammalian cells.
Sequence:	MDHSHHMGMS YMDSNSTMQP SHHHPTTSAS HSHGGGDSSM MMMPMTFYFG FKNVELLFSG LVINTAGEMA GAFVAVFLLA MFYEGLKIAR ESLLRKSQVS IRYNSMPVPG PNGTILMETH KTVGQQMLSF PHLLQTVLHI IQVVISYFLM LIFMTYNGYL CIAVAAGAGT GYFLFSWKKA VVVDITEHCH **Sequence without tag. The proposed Purification-Tag is 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: • Made to order protein - from design to production - by highly experienced protein experts. • Protein expressed in mammalian cells and purified in one-step affinity chromatography • The optimized expression system ensures reliability for intracellular, secreted and

Product Details

	transmembrane proteins. • 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 try to ensure that you receive soluble protein. If you are not interested in a full length protein, please contact us for individual protein fragments. 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

Target:	SLC31A1
Alternative Name:	SLC31A1 (SLC31A1 Products)
Background:	High affinity copper uptake protein 1 (Copper transporter 1) (hCTR1) (Solute carrier family 31 member 1) [Cleaved into: Truncated CTR1 form],FUNCTION: [High affinity copper uptake protein 1]: Uniporter that mediates the transport of copper(1+) from the extracellular space to the cytoplasm, across the plasma membrane (PubMed:11734551, PubMed:16135512, PubMed:17525160, PubMed:19740744, PubMed:20451502, PubMed:20569931, PubMed:23658018) and delivers directly copper(1+) to specific chaperone such as ATOX1, via a copper(1+)- mediated transient interaction between the C-terminal domain and a copper(1+) chaperone, thus controlling intracellular copper(1+) levels (PubMed:26745413, PubMed:11734551, PubMed:17525160, PubMed:20451502, PubMed:19740744, PubMed:16135512, PubMed:23658018, PubMed:20569931). May function in copper(1+) import from the apical membrane thus may drive intestinal copper absorption (By similarity). The copper(1+) transport mechanism is sodium-independent, saturable and of high-affinity (PubMed:11734551). Also mediates the uptake of silver(1+) (PubMed:20569931). May function in the influx of the platinum-containing chemotherapeutic agents (PubMed:20451502, PubMed:20569931). The platinum-containing chemotherapeutic agents uptake is saturable (By similarity). In vitro, mediates the transport of cadmium(2+) into cells (PubMed:33294387). Also participates in the first step of copper(2+) acquisition by cells through a direct transfer of

Target Details

	copper(2+) from copper(2+) carriers in blood, such as ALB to the N-terminal domain of SLC31A1, leading to copper(2+) reduction and probably followed by copper(1+) stabilization (PubMed:30489586). In addition, functions as a redox sensor to promote angiogenesis in endothelial cells, in a copper(1+) transport independent manner, by transmitting the VEGF-induced ROS signal through a sulfenylation at Cys-189 leadin g to a subsequent disulfide bond formation between SLC31A1 and KDR (PubMed:35027734). The SLC31A1-KDR complex is then co-internalized to early endosomes, driving a sustained VEGFR2 signaling (PubMed:35027734). {ECO:0000250|UniProtKB:Q8K211, ECO:0000250|UniProtKB:Q9JK41, ECO:0000269|PubMed:11734551, ECO:0000269|PubMed:16135512, ECO:0000269|PubMed:17525160, ECO:0000269|PubMed:19740744, ECO:0000269|PubMed:20451502, ECO:0000269|PubMed:20569931, ECO:0000269|PubMed:23658018, ECO:0000269|PubMed:26745413, ECO:0000269|PubMed:30489586, ECO:0000269|PubMed:33294387, ECO:0000269|PubMed:35027734}., FUNCTION: [Truncated CTR1 form]: Mobilizes copper(1+) out of the endosomal compartment, making copper(1+) available for export out of the cells. {ECO:0000250|UniProtKB:Q8K211}.
Molecular Weight:	21.1 kDa
UniProt:	O15431

Application Details

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

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