

Datasheet for ABIN7563884

SLC6A4 Protein (AA 1-630) (His tag)



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Overview

Quantity:	1 mg
Target:	SLC6A4
Protein Characteristics:	AA 1-630
Origin:	Mouse
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This SLC6A4 protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Purpose:	Custom-made recombinat Slc6a4 Protein expressed in mammalian cells.
Sequence:	<p>METTPLNSQK VLSECKDKED CQENGVLQKG VPTPADKAGP GQISNGYS AV PSTSAGDEAP</p> <p>HSTPAATTTL VAEIHQGERE TWGKKMDFLL SVIGYAVDLG NIWRFPYICY QNGGGAFLLP</p> <p>YTIMAIFGGI PLFYMEALG QYHRNGCISI WKKICPIFKG IGYAICIAF YIASYYNTII AWALYYLISS</p> <p>FTDQLPWTSC KNSWNTGNCT NYFAQDNITW TLHSTSPAEE FYLRHVLQIH QSKGLQDLGT</p> <p>ISWQLALCIM LIFTIIFYFSI WKGVKTSQKV VVWTATFPYI VLSVLLVRGA TLPGAWRGVV</p> <p>FYLKPNWQKL LETGVWVDAA AQIFFSLGPG FGVLLAFASY NKFNNNCYQD ALVTSVNNCM</p> <p>TSFVSGFVIF TVLGYMAEMR NEDVSEVAKD AGPSLLFITY AEAIANMPAS TFFAIIFFLM</p> <p>LITLGLDSTF AGLEGVITAV LDEFPHIWAK RREWFVLIVV ITCILGSLLT LTSGGAYVVT</p> <p>LLEEYATGPA VLTVALIEAV VSWFYGITQ FCSDVKEMLG FSPGWFWRIC WVAISPLFLL</p> <p>FIICSFLMSP PQLRLFQYNY PHWSIILGYC IGTSSVICIP IYIYRLIST PGTLKRIIK SITPETPTEI</p> <p>PCGDIRMNAV Sequence without tag. The proposed Purification-Tag is based on</p>

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.

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 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, Western Blot

Grade:

custom-made

Target Details

Target:

SLC6A4

Alternative Name:

Slc6a4 ([SLC6A4 Products](#))

Background:

Sodium-dependent serotonin transporter (SERT) (5HT transporter) (5HTT) (Solute carrier family 6 member 4), FUNCTION: Serotonin transporter that cotransports serotonin with one Na(+) ion in exchange for one K(+) ion and possibly one proton in an overall electroneutral transport cycle. Transports serotonin across the plasma membrane from the extracellular compartment to the cytosol thus limiting serotonin intercellular signaling (PubMed:9037532, PubMed:9547354) (By similarity). Essential for serotonin homeostasis in the central nervous system. In the developing somatosensory cortex, acts in glutamatergic neurons to control serotonin uptake and its trophic functions accounting for proper spatial organization of cortical neurons and elaboration of sensory circuits. In the mature cortex, acts primarily in brainstem raphe neurons to mediate serotonin uptake from the synaptic cleft back into the pre-synaptic terminal thus terminating serotonin signaling at the synapse (PubMed:25600870,

Target Details

PubMed:9547354). Modulates mucosal serotonin levels in the gastrointestinal tract through uptake and clearance of serotonin in enterocytes. Required for enteric neurogenesis and gastrointestinal reflexes (PubMed:27111230). Regulates blood serotonin levels by ensuring rapid high affinity uptake of serotonin from plasma to platelets, where it is further stored in dense granules via vesicular monoamine transporters and then released upon stimulation (PubMed:18317590). Mechanistically, the transport cycle starts with an outward-open conformation having Na¹(+) and Cl⁽⁻⁾ sites occupied. The binding of a second extracellular Na²(+) ion and serotonin substrate leads to structural changes to outward-occluded to inward-occluded to inward-open, where the Na²(+) ion and serotonin are released into the cytosol. Binding of intracellular K⁽⁺⁾ ion induces conformational transitions to inward-occluded to outward-open and completes the cycle by releasing K⁽⁺⁾ possibly together with a proton bound to Asp-98 into the extracellular compartment. Na¹(+) and Cl⁽⁻⁾ ions remain bound throughout the transport cycle (PubMed:9037532, PubMed:9547354) (By similarity). Additionally, displays serotonin-induced channel-like conductance for monovalent cations, mainly Na⁽⁺⁾ ions. The channel activity is uncoupled from the transport cycle and may contribute to the membrane resting potential or excitability (By similarity). {ECO:0000250|UniProtKB:P31645, ECO:0000250|UniProtKB:P31652, ECO:0000269|PubMed:18317590, ECO:0000269|PubMed:25600870, ECO:0000269|PubMed:27111230, ECO:0000269|PubMed:9037532, ECO:0000269|PubMed:9547354}.

Molecular Weight: 70.0 kDa

UniProt: [Q60857](#)

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.

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

Handling

Storage Comment:	Store at -80°C.
Expiry Date:	12 months