Datasheet for ABIN7564920

SLC26A5 Protein (AA 1-744) (His tag)

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Overview

Quantity:	1 mg
Target:	SLC26A5
Protein Characteristics:	AA 1-744
Origin:	Mouse
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This SLC26A5 protein is labelled with His tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB)

Product Details

Purpose:	Custom-made recombinat Slc26a5 Protein expressed in mammalien cells.
Sequence:	MDHAEENEIP AETQRYYVER PIFSHPVLQE RLHVKDKVTE SIGDKLKQAF TCTPKKIRNI IYMFLPITKW LPAYKFKEYV LGDLVSGIST GVLQLPQGLA FAMLAAVPPV FGLYSSFYPV IMYCFFGTSR HISIGPFAVI SLMIGGVAVR LVPDDIVIPG GVNATNGTEA RDALRVKVAM SVTLLSGIIQ FCLGVCRFGF VAIYLTEPLV RGFTTAAAVH VFTSMLKYLF GVKTKRYSGI FSVVYSTVAV LQNVKNLNVC SLGVGLMVFG LLLGGKEFNE RFKEKLPAPI PLEFFAVVMG TGISAGFNLH ESYSVDVVGT LPLGLLPPAN PDTSLFHLVY VDAIAIAIVG FSVTISMAKT LANKHGYQVD GNQELIALGI CNSIGSLFQT FSISCSLSRS LVQEGTGGKT QLAGCLASLM ILLVILATGF LFESLPQAVL SAIVIVNLKG MFMQFSDLPF FWRTSKIELT IWLTTFVSSL FLGLDYGLIT AVIIALLTVI YRTQSPSYKV LGQLPDTDVY IDIDAYEEVK EIPGIKIFQI NAPIYYANSD LYSSALKRKT GVNPALIMGA RRKAMRKYAK EVGNANVANA TVVKVDAEVD GENATKPEEE DDEVKFPPIV IKTTFPEELQ RFLPQGENVH TVILDFTQVN FVDSVGVKTL AGIVKEYGDV

Product Details

	GIYVYLAGCS PQVVNDLTRN NFFENPALKE LLFHSIHDAV LGSQVREAMA EQEATASLPQ EDMEPNATPT TPEA **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.**
Characteristics:	Key Benefits: • Made to order protein - from design to production - by highly experienced protein experts. • Protein expressed in mammalien 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:	SLC26A5
Alternative Name:	Slc26a5 (SLC26A5 Products)
Background:	Prestin (Solute carrier family 26 member 5),FUNCTION: Voltage-sensitive motor protein that drives outer hair cell (OHC) electromotility (eM) and participates in sound amplification in the hearing organ (PubMed:12239568). Converts changes in the transmembrane electric potential into mechanical displacements resulting in the coupling of its expansion to movement of a charged voltage sensor across the lipid membrane (PubMed:12239568). The nature of the voltage sensor is not completely clear, and two models compete (By similarity). In the first model, acts as an incomplete transporter where intracellular chloride anion acts as extrinsic voltage sensor that drives conformational change in the protein which is sufficient to produce a length change in the plane of the membrane and hence in the length of the OHC (By similarity).

Target Details

	The second model in which multiple charged amino acid residues are distributed at the intracellular and extracellular membrane interfaces that form an intrinsic voltage sensor, whose movement produces the non-linear capacitance (NLC) (By similarity). However, the effective voltage sensor may be the result of a hybrid voltage sensor, assembled from intrinsic charge (charged residues) and extrinsic charge (bound anion) (By similarity). Notably, binding of anions to the anion-binding pocket partially neutralizes the intrinsic positive charge rather than to form an electrically negative sensor, therefore remaining charge may serve as voltage sensor that, after depolarization, moves from down (expanded state) to up (contracted) conformation, which is accompanied by an eccentric contraction of the intermembrane cross-sectional area of the protein as well as a major increase in the hydrophobic thickness of the protein having as consequences the plasma membrane thickening and the cell contraction after membrane depolarization (By similarity). The anion-binding pocket transits from the inward-open (Down) state, where it is exposed toward the intracellular solvent in the absence of anion, to the occluded (Up) state upon anion binding (By similarity). Salicylate competes for the anion-binding site and inhibits the voltage-sensor movement, and therefore inhibits the charge transfer and electromotility by displacing Cl(-) from the anion-binding site and by preventing the structural transitions to the contracted state (By similarity). In addition, can act as a weak Cl(-)/HCO3(-) antiporter across the cell membrane and so regulate the intracellular pH of the outer hair cells (OHCs), while firstly found as being unable to mediate electrogenic anion transport (By similarity). Moreover, supports a role in cardiac mechanical amplification serving as an elastic element to enhance the actomyosin- based sarcomere contraction system (PubMed:33951436). {ECO:0000250|UniProtKB:D7PC76, ECO:0000250|UniProtKB:P58743, ECO:0000250|UniProtKB:Q9EPH0, ECO:0000250|UniProtKB:Q9JKQ2, ECO:0000269|PubMed:12239568, ECO:0000269|PubMed:33951436}.
Molecular Weight:	81.3 kDa
UniProt:	Q99NH7
Pathways:	Sensory Perception of Sound, Dicarboxylic Acid Transport

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