Datasheet for ABIN7556044

WNK4 Protein (AA 1-1243) (His tag)

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Overview

Quantity:	1 mg
Target:	WNK4
Protein Characteristics:	AA 1-1243
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This WNK4 protein is labelled with His tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB)

Product Details

Purpose:	Custom-made recombinat WNK4 Protein expressed in mammalien cells.
Sequence:	MLASPATETT VLMSQTEADL ALRPPPPLGT AGQPRLGPPP RRARRFSGKA EPRPRSSRLS RRSSVDLGLL SSWSLPASPA PDPPDPPDSA GPGPARSPPP SSKEPPEGTW TEGAPVKAAE DSARPELPDS AVGPGSREPL RVPEAVALER RREQEEKEDM ETQAVATSPD GRYLKFDIEI GRGSFKTVYR GLDTDTTVEV AWCELQTRKL SRAERQRFSE EVEMLKGLQH PNIVRFYDSW KSVLRGQVCI VLVTELMTSG TLKTYLRRFR EMKPRVLQRW SRQILRGLHF LHSRVPPILH RDLKCDNVFI TGPTGSVKIG DLGLATLKRA SFAKSVIGTP EFMAPEMYEE KYDEAVDVYA FGMCMLEMAT SEYPYSECQN AAQIYRKVTS GRKPNSFHKV KIPEVKEIIE GCIRTDKNER FTIQDLLAHA FFREERGVHV ELAEEDDGEK PGLKLWLRME DARRGGRPRD NQAIEFLFQL GRDAAEEVAQ EMVALGLVCE ADYQPVARAV RERVAAIQRK REKLRKAREL EALPPEPGPP PATVPMAPGP PSVFPPEPEE PEADQHQPFL FRHASYSSTT SDCETDGYLS SSGFLDASDP ALQPPGGVPS SLAESHLCLP SAFALSIPRS GPGSDFSPGD SYASDAASGL SDVGEGMGQM

Product Details

	RRPPGRNLRR RPRSRLRVTS VSDQNDRVVE CQLQTHNSKM VTFRFDLDGD SPEEIAAAMV YNEFILPSER DGFLRRIREI IQRVETLLKR DTGPMEAAED TLSPQEEPAP LPALPVPLPD PSNEELQSST SLEHRSWTAF STSSSSPGTP LSPGNPFSPG TPISPGPIFP ITSPPCHPSP SPFSPISSQV SSNPSPHPTS SPLPFSSSTP EFPVPLSQCP WSSLPTTSPP TFSPTCSQVT LSSPFFPPCP STSSFPSTTA APLLSLASAF SLAVMTVAQS LLSPSPGLLS QSPPAPPSPL PSLPLPPPVA PGGQESPSPH TAEVESEASP PPARPLPGEA RLAPISEEGK PQLVGRFQVT SSKEPAEPLP LQPTSPTLSG SPKPSTPQLT SESSDTEDSA GGGPETREAL AESDRAAEGL GAGVEEEGDD GKEPQVGGSP QPLSHPSPVW MNYSYSSLCL SSEESESSGE DEEFWAELQS LRQKHLSEVE TLQTLQKKEI EDLYSRLGKQ PPPGIVAPAA MLSSRQRRLS KGSFPTSRRN SLQRSEPPGP GIMRRNSLSG SSTGSQEQRA SKGVTFAGDV GRM **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:	WNK4
Alternative Name:	WNK4 (WNK4 Products)

Target Details

Background:	Serine/threonine-protein kinase WNK4 (EC 2.7.11.1) (Protein kinase lysine-deficient 4) (Protein kinase with no lysine 4),FUNCTION: Serine/threonine-protein kinase component of the WNK4-SPAK/OSR1 kinase cascade, which acts as a key regulator of ion transport in the distal nephron and blood pressure (By similarity). The WNK4-SPAK/OSR1 kinase cascade is composed of WNK4, which mediates phosphorylation and activation of downstream kinases OXSR1/OSR1 and STK39/SPAK (PubMed:16832045). Following activation, OXSR1/OSR1 and STK39/SPAK catalyze phosphorylation of ion cotransporters, such as SLC12A1/NKCC2, SLC12A2/NKCC1, SLC12A3/NCC, SLC12A5/KCC2 or SLC12A6/KCC3, regulating their activity (PubMed:16832045, PubMed:22989884). Acts as a molecular switch that regulates the balance between renal salt reabsorption and K(+) secretion by modulating the activities of renal transporters and channels, including the Na-Cl cotransporter SLC12A3/NCC and the K(+) channel, KCNJ1/ROMK (By similarity). Regulates NaCl reabsorption in the distal nephron by activating the thiazide-sensitive Na-Cl cotransporter SLC12A3/NCC in distal convoluted tubule cells of kidney: activates SLC12A3/NCC in a OXSR1/OSR1- and STK39/SPAK-dependent process (By similarity). Also acts as a scaffold protein independently of its protein kinase activity: negatively regulates cell membrane localization of various transporters and channels (CFTR, KCNJ1/ROMK, SLC4A4, SLC26A9 and TRPV4) by clathrin-dependent endocytosis (By similarity). Also inhbits the activity of the epithelial Na(+) channel (ENaC) SCNN1A, SCNN1B, SCNN1D in a inase-independent mechanism (By similarity). May also phosphorylate NEDD4L (PubMed:20525693). {ECO:0000250|UniProtKB:Q80UE6, ECO:0000269|PubMed:16832045, ECO:0000269|PubMed:20525693, ECO:0000269|PubMed:22989884}.
Molecular Weight:	134.7 kDa
UniProt:	Q96J92

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

Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	12 months

