Datasheet for ABIN7546344

SPHK2 Protein (AA 1-654) (His tag)

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Overview

Quantity:	1 mg
Target:	SPHK2
Protein Characteristics:	AA 1-654
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This SPHK2 protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Purpose:	Custom-made recombinat SPHK2 Protein expressed in mammalien cells.
Sequence:	MNGHLEAEEQ QDQRPDQELT GSWGHGPRST LVRAKAMAPP PPPLAASTPL LHGEFGSYPA RGPRFALTLT SQALHIQRLR PKPEARPRGG LVPLAEVSGC CTLRSRSPSD SAAYFCIYTY PRGRRGARRR ATRTFRADGA ATYEENRAEA QRWATALTCL LRGLPLPGDG EITPDLLPRP PRLLLLVNPF GGRGLAWQWC KNHVLPMISE AGLSFNLIQT ERQNHARELV QGLSLSEWDG IVTVSGDGLL HEVLNGLLDR PDWEEAVKMP VGILPCGSGN ALAGAVNQHG GFEPALGLDL LLNCSLLLCR GGGHPLDLLS VTLASGSRCF SFLSVAWGFV SDVDIQSERF RALGSARFTL GTVLGLATLH TYRGRLSYLP ATVEPASPTP AHSLPRAKSE LTLTPDPAPP MAHSPLHRSV SDLPLPLPQP ALASPGSPEP LPILSLNGGG PELAGDWGGA GDAPLSPDPL LSSPPGSPKA ALHSPVSEGA PVIPPSSGLP LPTPDARVGA STCGPPDHLL PPLGTPLPPD WVTLEGDFVL MLAISPSHLG ADLVAAPHAR FDDGLVHLCW VRSGISRAAL LRLFLAMERG SHFSLGCPQL GYAAARAFRL EPLTPRGVLT VDGEQVEYGP LQAQMHPGIG TLLTGPPGCP GREP **Sequence**

Product Details

	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:	SPHK2
Alternative Name:	SPHK2 (SPHK2 Products)
Background:	Sphingosine kinase 2 (SK 2) (SPK 2) (EC 2.7.1.91),FUNCTION: Catalyzes the phosphorylation of sphingosine to form sphingosine-1-phosphate (SPP), a lipid mediator with both intra- and extracellular functions. Also acts on D-erythro-dihydrosphingosine, D-erythro-sphingosine and L-threo-dihydrosphingosine. Binds phosphoinositides (PubMed:19168031, PubMed:12954646). In contrast to prosurvival SPHK1, has a positive effect on intracellular ceramide levels, inhibits cells growth and enhances apoptosis (PubMed:16118219). In mitochondria, is important for cytochrome-c oxidase assembly and mitochondrial respiration. The SPP produced in mitochondria binds PHB2 and modulates the regulation via PHB2 of complex IV assembly and respiration (PubMed:20959514). In nucleus, plays a role in epigenetic regulation of gene expression. Interacts with HDAC1 and HDAC2 and, through SPP production, inhibits their

Target Details

	enzymatic activity, preventing the removal of acetyl groups from lysine residues with histones. Up-regulates acetylation of histone H3-K9, histone H4-K5 and histone H2B-K12 (PubMed:19729656). In nucleus, may have an inhibitory effect on DNA synthesis and cell cycle (PubMed:12954646, PubMed:16103110). In mast cells, is the main regulator of SPP production which mediates calcium influx, NF-kappa-B activation, cytokine production, such as TNF and IL6, and degranulation of mast cells (By similarity). In dopaminergic neurons, is involved in promoting mitochondrial functions regulating ATP and ROS levels (By similarity). Also involved in the regulation of glucose and lipid metabolism (By similarity). {ECO:0000250|UniProtKB:Q9JIA7, ECO:0000269|PubMed:12954646, ECO:0000269|PubMed:16103110, ECO:0000269|PubMed:16118219, ECO:0000269|PubMed:19168031, ECO:0000269|PubMed:19729656, ECO:0000269|PubMed:20959514}.
Molecular Weight:	69.2 kDa
UniProt:	Q9NRA0
Pathways:	VEGF Signaling

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