Datasheet for ABIN7548419

Hexokinase 1 Protein (HK1) (AA 1-917) (His tag)

Go to Product page

Overview

Quantity:	1 mg
Target:	Hexokinase 1 (HK1)
Protein Characteristics:	AA 1-917
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This Hexokinase 1 protein is labelled with His tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB)

Product Details

Purpose:	Custom-made recombinat HK1 Protein expressed in mammalien cells.
Sequence:	MIAAQLLAYY FTELKDDQVK KIDKYLYAMR LSDETLIDIM TRFRKEMKNG LSRDFNPTAT VKMLPTFVRS IPDGSEKGDF IALDLGGSSF RILRVQVNHE KNQNVHMESE VYDTPENIVH GSGSQLFDHV AECLGDFMEK RKIKDKKLPV GFTFSFPCQQ SKIDEAILIT WTKRFKASGV EGADVVKLLN KAIKKRGDYD ANIVAVVNDT VGTMMTCGYD DQHCEVGLII GTGTNACYME ELRHIDLVEG DEGRMCINTE WGAFGDDGSL EDIRTEFDRE IDRGSLNPGK QLFEKMVSGM YLGELVRLIL VKMAKEGLLF EGRITPELLT RGKFNTSDVS AIEKNKEGLH NAKEILTRLG VEPSDDDCVS VQHVCTIVSF RSANLVAATL GAILNRLRDN KGTPRLRTTV GVDGSLYKTH PQYSRRFHKT LRRLVPDSDV RFLLSESGSG KGAAMVTAVA YRLAEQHRQI EETLAHFHLT KDMLLEVKKR MRAEMELGLR KQTHNNAVVK MLPSFVRRTP DGTENGDFLA LDLGGTNFRV LLVKIRSGKK RTVEMHNKIY AIPIEIMQGT GEELFDHIVS CISDFLDYMG IKGPRMPLGF TFSFPCQQTS LDAGILITWT KGFKATDCVG HDVVTLLRDA IKRREEFDLD VVAVVNDTVG

Product Details

	TMMTCAYEEP TCEVGLIVGT GSNACYMEEM KNVEMVEGDQ GQMCINMEWG AFGDNGCLDD IRTHYDRLVD EYSLNAGKQR YEKMISGMYL GEIVRNILID FTKKGFLFRG QISETLKTRG IFETKFLSQI ESDRLALLQV RAILQQLGLN STCDDSILVK TVCGVVSRRA AQLCGAGMAA VVDKIRENRG LDRLNVTVGV DGTLYKLHPH FSRIMHQTVK ELSPKCNVSF LLSEDGSGKG AALITAVGVR LRTEASS **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:	Hexokinase 1 (HK1)
Alternative Name:	HK1 (HK1 Products)
Background:	Hexokinase-1 (EC 2.7.1.1) (Brain form hexokinase) (Hexokinase type I) (HK I) (Hexokinase-A),FUNCTION: Catalyzes the phosphorylation of various hexoses, such as D-glucose, D-glucosamine, D-fructose, D-mannose and 2-deoxy-D-glucose, to hexose 6-phosphate (D-glucose 6-phosphate, D-glucosamine 6-phosphate, D-fructose 6-phosphate, D-mannose 6-phosphate and 2-deoxy-D-glucose 6-phosphate, respectively) (PubMed:1637300, PubMed:25316723, PubMed:27374331). Does not phosphorylate N-acetyl-D-glucosamine

Target Details

	(PubMed:27374331). Mediates the initial step of glycolysis by catalyzing phosphorylation of D-glucose to D-glucose 6-phosphate (By similarity). Involved in innate immunity and inflammation by acting as a pattern recognition receptor for bacterial peptidoglycan (PubMed:27374331). When released in the cytosol, N-acetyl-D-glucosamine component of bacterial peptidoglycan inhibits the hexokinase activity of HK1 and causes its dissociation from mitochondrial outer membrane, thereby activating the NLRP3 inflammasome (PubMed:27374331). {ECO:0000250|UniProtKB:P05708, ECO:0000269|PubMed:1637300, ECO:0000269|PubMed:25316723, ECO:0000269|PubMed:27374331}.
Molecular Weight:	102.5 kDa
UniProt:	P19367
Pathways:	Carbohydrate Homeostasis, Warburg Effect

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