

Datasheet for ABIN7562918

**Hexokinase 1 Protein (HK1) (AA 1-974) (His tag)**[Go to Product page](#)

## Overview

Quantity:	1 mg
Target:	Hexokinase 1 (HK1)
Protein Characteristics:	AA 1-974
Origin:	Mouse
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:	MGWGAPLLSR MLHGPGQAGE TSPVPERQSG SENPASEDRR PLEKQCShHL YTMGQNCQRG QAVDVEPKIR PPLTEEKIDK YLYAMRLSDE ILIDILTRFK KEMKNGLSRD YNPTASVKML PTFVRSIPDG SEKGDFIALD LGGSSFRILR VQVNHEKSQN VSMESEVYDT PENIVHGSGS QLFDHVAECL GDFMEKRKIK DKKLPVGFTF SFPCRQSKID EAVLITWTKR FKASGVEGAD VVKLLNKAIK KRGDYDANIV AVVNDTVGTM MTCGYDDQQC EVGLIIGTGT NACYMEELRH IDLVEGDEGR MCINTEWGAF GDDGSLEDIR TEFDRELD RG SLNPGKQLFE KMVSGMYMGE LVRLILVKMA KESLLFEGRI TPELLTRGKF TTSDVAAIET DKEGVQNAKE ILTRLGVEPS HDDCVSVQHV CTIVSFRSAN LVAATLGAIL NRLRDNKGTP RLRTTVGVGDG SLYKMHPQYS RRFHKTLRRL VPDSVRFLL SESGSGKGAA MVTAVAYRLA EQHRQIEETL SHFRLSKQAL MEVKKKLRSE MEMGLRKETN SRATVKMLPS YVRSIPDGTE HGDFLALDLG GTNFRVLLVK IRSGKKRTVE MHNKIYSIPL EIMQGTGDEL FDHIVSCISD FLDYMGIKGP RMPLGFTFSF

## Product Details

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PCKQTSLDCG ILITWTKGFK ATDCVGHDA TLLRDAVKRR EEFDLVVAV VNDTVGTMMT  
CAYEEPSCEI GLIVGTGSA CYMEEMKNVE MVEGNQGQMC INMEWGAFGD NGCLDDIRT  
FDKVVDEYSL NSGKQRFKEM ISGMYLGEIV RNILIDFTKK GFLFRGQISE PLKTRGIFET  
KFLSQIESDR LALLQVRAIL QQLGLNSTCD DSILVKTVCV VSKRAAQLC GAGMAAVVEK  
IRENRGLDHL NVTVGVDGTL YKLHPHFSRI MHQTVKELSP KCTVSFLLSE DGSGKGAALI  
TAVGVRLRGD PTNA **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.**

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### 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.

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### Purity:

> 90 % as determined by Bis-Tris Page, Western Blot

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### Grade:

custom-made

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## Target Details

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### Target:

Hexokinase 1 (HK1)

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### Alternative Name:

Hk1 ([HK1 Products](#))

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### Background:

Hexokinase-1 (EC 2.7.1.1) (Hexokinase type I) (HK I) (Hexokinase, tumor isozyme),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). Does not phosphorylate N-acetyl-D-glucosamine (By

## Target Details

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similarity). 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. 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:0000250|UniProtKB:P19367, ECO:0000269|PubMed:27374331}.

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Molecular Weight: 108.3 kDa

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UniProt: [P17710](#)

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Pathways: [Carbohydrate Homeostasis](#), [Warburg Effect](#)

## Application Details

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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.

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Restrictions: For Research Use only

## Handling

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Format: Liquid

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Buffer: The buffer composition is at the discretion of the manufacturer.

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Handling Advice: Avoid repeated freeze-thaw cycles.

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Storage: -80 °C

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Storage Comment: Store at -80°C.

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Expiry Date: 12 months