

Recombinant Human HK1, His-tagged

Cat. No. HK1-29228TH **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant full length Human Hexokinase 1 fused to His-tag at N-terminus; amino acids 1-917 , 104.6kDa.
Species	Human
Source	E.coli
ProteinLength	1-917 a.a.
Description	Hexokinases phosphorylate glucose to produce glucose-6-phosphate, the first step in most glucose metabolism pathways. This gene encodes a ubiquitous form of hexokinase which localizes to the outer membrane of mitochondria. Mutations in this gene have been associated with hemolytic anemia due to hexokinase deficiency. Alternative splicing of this gene results in five transcript variants which encode different isoforms, some of which are tissue-specific. Each isoform has a distinct N-terminus; the remainder of the protein is identical among all the isoforms. A sixth transcript variant has been described, but due to the presence of several stop codons, it is not thought to encode a protein.
Conjugation	HIS
Tissue specificity	Isoform 2 is erythrocyte specific. Isoform 3 and isoform 4 are testis-specific.
Biological activity	Specific activity is 7-8 units/ml obtained by measuring the increase of NADPH in absorbance at 340 nm resulting from the reduction of NADP. In the coupled mode,

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	one unit will produce 1.0 umole of NADPH per minute as glucose is phosphorylated by ATP at pH
Form	Liquid
Purity	>90% by SDS-PAGE
Storage buffer	Preservative: None Constituents: 10% Glycerol, 20mM Tris HCl, pH 8.0
Storage	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
Sequences of amino acids	MGSSHHHHHH SSGLVPRGSH MIAAQLLAYY FTELKDDQVK KIDKYLYAMR LSETLIDIM TRFRKEMKNG LSRDFNPTAT VKMLPTFVRS IPDGSEKGF IALDLGGSSF RILRVQVNHE KNQNVHMESE VYDTPENIVH GSGSQLFDHV AECLGDFMEK RKIKDKKLPV GFTFSFPCQQ SKIDEAILIT WTKRFKASGV EGADVVKLLN KAIKKRGDYG ANIVAVVNDT VGTMMTCGYD DQHCEVGLII GTGTNACYME ELRHIDLVEG DEGRMCINTE WGAFGDDGSL EDIRTEFDRE IDRGS LNPGK QLF EK MVSGM YLGELVRLIL VKMAKEGLLF EGRITPELLT RGKFN TSDVS AIEKNKEGLH NAKEILTRLG VEPSDDDCVS VQHVCTIVSF RSANLVAATL GAILNRLRDN KGTPRLRTTV GVDGS LYKTH PQYSRRFHKT LRRLVPDS DV RFLLES EGS G KGAAMVTAVA YRLAEQHRQI EETLAHFHLT KDM LLEVKKR MRAEMELGLR KQTHNNAVVK MLPSFVRRTP DGTENGDFLA LD LGGTNFRV LLVKIRSGKK RTVEMHNKIY AIP IEIMQGT GEELFDHIVS CISDFLDYMG IKGPRMPLGF TFSFPCQQTS LDAGILITWT KGFKATDCVG HDVVTLLRDA IKRREEFDLD VVAVVNDTVG TMMTCAYEEP TCEVGLIVGT GSNACYMEEM KNVEMVEGDQ GQMCINMEWG AFGDNGCLDD IRTHYDRLVD EYSLNAGKQR YEKMISGMYL GEIVRNILID FTKKGFLFRG QISETLKTRG IFETKFLSQI ESDRLALLQV RAILQQLGLN STCDD SILVK TVCGVVSRR A AQLCGAGMAA VVDKIRENRG LDRLNVTVG V DGTLYKLHPH FSRIMHQTVK

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ELSPKCNVSF LLSGDGSGKG AALITAVGVR LRTEASS

Sequence Similarities Belongs to the hexokinase family.

Full Length Full L.

GENE INFORMATION

Gene Name HK1 hexokinase 1 [Homo sapiens]

Official Symbol HK1

Synonyms HK1; hexokinase 1; hexokinase-1;

Gene ID 3098

mRNA Refseq NM_000188

Protein Refseq NP_000179

MIM 142600

Uniprot ID P19367

Chromosome Location 10q22

Pathway Amino sugar and nucleotide sugar metabolism, organism-specific biosystem; Amino sugar and nucleotide sugar metabolism, conserved biosystem; Butirosin and neomycin biosynthesis, organism-specific biosystem; Butirosin and neomycin biosynthesis, conserved biosystem; Carbohydrate digestion and absorption,

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organism-specific biosystem;

Function

ATP binding; hexokinase activity; kinase activity; nucleotide binding; transferase activity;

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