

## Recombinant Human HK1, His-tagged

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

### SPECIFICATION

<b>Product Overview</b>	Recombinant full length Human Hexokinase 1 fused to His-tag at N-terminus; amino acids 1-917 , 104.6kDa.
<b>Species</b>	Human
<b>Source</b>	E.coli
<b>ProteinLength</b>	1-917 a.a.
<b>Description</b>	<p>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.</p> <p>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.</p>
<b>Conjugation</b>	HIS
<b>Tissue specificity</b>	Isoform 2 is erythrocyte specific. Isoform 3 and isoform 4 are testis-specific.
<b>Biological activity</b>	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
<b>Form</b>	Liquid
<b>Purity</b>	>90% by SDS-PAGE
<b>Storage buffer</b>	Preservative: None Constituents: 10% Glycerol, 20mM Tris HCl, pH 8.0
<b>Storage</b>	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
<b>Sequences of amino acids</b>	<p>MGSSHHHHHH SSSLVPRGSH MIAAQLLAYY FTELKDDQVK KIDKYLYAMR          LSETLIDIM TRFRKEMKNG LSRDFNPTAT VKMLPTFVRS IPDGSEKGF          IALDLGGSSF RILRVQVNHE KNQNVHMESE VYDTPENIVH GSGSQLFDHV          AECLGDFMEK RKIKDKKLPV GFTFSFPCQQ SKIDEAILIT WTKRFKASGV          EGADVVKLLN KAIKKRGDYD ANIVAVVNDT VGTMMTCGYD DQHCEVGLII          GTGTNACYME ELRHIDLVEG DEGRMCINTE WGAFGDDGSL EDIRTEFDRE          IDRGSLNPGK QLFKEMVSGM YLGELVRLIL VKMAKEGLLF EGRITPELLT          RGKFNTSDVS AIEKNKEGLH NAKEILTRLG VEPSDDDCVS VQHVCTIVSF          RSANLVAATL GAILNRLRDN KGTPRLRTTV GVDGSLYKTH PQYSRRFHKT          LRRLVPDSDV RFLLESSESGS KGAAMVTAVA YRLAEQHRQI EETLAHFHLT          KDMLEVKKR MRAEMELGLR KQTHNNAVVK MLPSFVRRTP DGTENGDFLA          LDLGGTNFRV LLVKIRSGKK RTVEMHNKIY AIPIEIMQGT GEELFDHIVS          CISDFLDYMG IKGPRMPLGF TFSFPCQQTS LDAGILITWT KGFKATDCVG          HDVVTLLRDA IKRREEFDLD VVAVVNDTVG TMMTCAYEEP TCEVGLIVGT          GSNACYMEEM KNVEMVEGDQ GQMCINMEWG AFGDNGCLDD IRTHYDRLVD          EYSLNAGKQR YEKMISGMYL GEIVRNILID FTKKGFLFRG QISETLKTRG          IFETKFLSQI ESDRLALLQV RAILQQLGLN STCDDSilVK TVCGVVSRA          AQLCGAGMAA VVDKIRENRG LDRLNVTVG V DGTLYKLPH FSRIMHQTVK</p>

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ELSPKCNVSF LLS EDGSGKG 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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