

Active Recombinant Human HK1 protein, His-tagged, Bioactivity Validated.

Cat. No. HK1-40H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Human HK1(1-917 aa) fused with His tag at N-terminal was expressed in E. coli.
Species	Human
Source	E.coli
ProteinLength	1-917 a.a.
Description	Hexokinase is the first enzyme in the glycolytic pathway, catalyzing the transfer of a phosphoryl group from ATP to glucose to form glucose-6-phosphate and ADP. In mammals, four distinct enzymes-types 1 to 4 hexokinases-have been identified. The enzyme is found in most cells, but there is tissue specificity for the particular type of hexokinase. Hexokinase1 is found in the adipose tissue and liver and encodes a ubiquitous form of hexokinase which localizes to the outer membrane of mitochondria. Mutations in this hexokinase1 have been associated with hemolytic anemia due to hexokinase deficiency.
Form	Liquid. In 20mM Tris-HCl, pH8.0, 10% glycerol
Bio-activity	Specific activity is > 3,000 pmol/min/ug. One unit will convert 1 pmoles of D-Glucose to D-Glucose-6-phosphate per minute at pH 7.5 at 37C.
Molecular Mass	104.6kDa (937aa)

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AA Sequence

MGSSHHHHHH SSGLVPRGSH MIAAQLLAYY FTELKDDQVK KIDKYLYAMR
 LSDETLIDIM TRFRKEMKNG LSRDFNPTAT VKMLPTFVRSIPDGSEKGDF
 IALDLGGSSF RILRVQVNHE KNQNVHMESE VYDTPENIVH GSGSQLFDHV
 AECLGDFMEK RKIKDKKLPV GFTSFPCQQSKIDEAILIT WTKRFKASGV
 EGADVVKLLN KAIKKRGDYG ANIVAVVNDT VGTMMTCGYD DQHCEVGLII
 GTGTNACYME ELRHIDLVEGDEGRMCINTE WGAFGDDGSL EDIRTEFDRE
 IDRGS LNPGK QLF EK MVSGM YLGELVRLIL VKMAKEGLLF EGRITPELLT
 RGKFNTSDVS
 AIEKNKEGLH NAKEILTRLG VEPSDDDCVS VQHVCTIVSF RSANLVAATL
 GAILNRLRDN KGTPRLRTTV GVDGS LYKTH PQYSRRFHKT LRR LVPDS DV
 RFL LSESGSG KGAAMVTAVA YRLAEQHRQI EETLAHFHLT K DMLLEVKKR
 MRAEMELGLR KQTHNNAVVK MLPSFVRRTPDGTENGDFLA LDLGGTNFRV
 LLVKIRSGKK RTVEMHNKIY AIP IEMQGT GEELFDHIVS CISDFLDYMG
 IKGPRMPLGF TFSFPCQQTSLDAGILITWT KGFKATDCVG HDVVTLLRDA
 IKRREEFDLD VVAVVNDTVG TMMTCAYEEP TCEVGLIVGT GSNACYMEEM
 KNVEMVEGDQ
 GQMCINMEWG AFGDNGCLDD IRTHYDRLVD EYSLNAGKQR YEKMISGMYL
 GEIVRNILID FTKKGFLFRG QISETLKTRG IFETKFLSQIESDRLALLQV
 RAILQQLGLN STCDD SILVK TVCGVVSRR AQLCGAGMAA VVDKIRENRG
 LDRLNVTGV DGTLYKLHPH FSRIMHQTVKELSPKCNVSF LLS EDGSGKG
 AALITAVGVR LRTEASS

Purity

> 90% by SDS - PAGE

Storage

Can be stored at +4 centigrade short term (1-2 weeks). For long term storage, aliquot and store at -20 centigrade or -70 centigrade. Avoid repeated freezing and thawing cycles.

Concentration

1 mg/ml (determined by Bradford assay)

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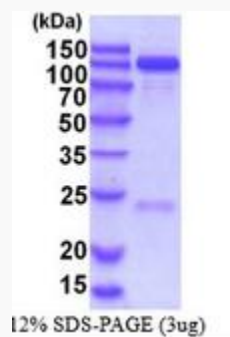
GENE INFORMATION

Gene Name	HK1 hexokinase 1 [Homo sapiens]
Official Symbol	HK1
Synonyms	HK1; hexokinase 1; hexokinase-1; HK I; glycolytic enzyme; hexokinase type I; brain form hexokinase; HKI; HXK1; HK1-ta; HK1-tb; HK1-tc;
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, organism-specific biosystem; Carbohydrate digestion and absorption, conserved biosystem; Fructose and mannose metabolism, organism-specific biosystem;
Function	ATP binding; hexokinase activity; kinase activity; nucleotide binding; transferase activity;

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