

Recombinant human Hexokinase 1 protein

Catalog Number: HXK0704

PRODUCT INFORMATION

Expression system

E.coli

Domain

1-917aa

UniProt No.

P19367

NCBI Accession No.

NP_000179.2

Alternative Names

HK1, Hexokinase 1, EC 2.7.1.1, Hexokinase type I, HK I, Brain form hexokinase, Hexokinase-1, BB404130, dea, Glycolytic enzyme, HEXOKIN, Hexokinase PI, Hexokinase type I, Hexokinase, tumor isozyme, Hexokinase-A, HK1 tb, Hk1-s, HK1-ta, HK1-tc, HKI, HXK1, mHk1-s.

PRODUCT SPECIFICATION

Molecular Weight

104.6 kDa (937aa)

Concentration

1mg/ml (determined by Bradford assay)

Formulation

Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 10% glycerol

Purity

> 85% by SDS-PAGE

Biological Activity

Specific activity is > 8,000pmol/min/ug. One unit will convert 1pmole of D-Glucose to D-Glucose-6-phosphate per minute at pH 7.5 at 37C.

Tag

His-Tag

Application

SDS-PAGE, Enzyme Activity

Storage Condition

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

BACKGROUND

Description

Hexokinase is the first enzyme in the glycolytic pathway, catalyzing the transfer of a phosphoryl group from ATP

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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. Recombinant human Hexokinase1, fused to His-tag at N-terminus, was expressed in E. coli and purified by using conventional chromatography techniques.

Amino acid Sequence

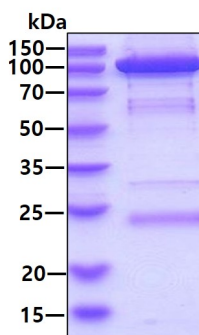
<MGSSHHHHHH SSGLVPRGSH> MIAAQLLAY FTELKDDQVK KIDKYLYAMR LSDETLIDIM TRFRKEMKNG LSRDFNPTAT VKMLPTFVRS IPDGSEKGF IALDLGGSSF RILRVQVNH KNQNVHMESE VYDTPENIVH GSGSQLFDHV AECLGDFMEK RKIKDKKLPV GFTFSFPCQQ SKIDEAILIT WTKRFKASGV EGADVVKLLN KAIKKRGDYD ANIVAVVNDT VGTMMTCGYD DQHCEVGLII GTGTNACYME ELRHIDLVEG DEGRMCINTE WGAFGDDGSL EDIRTEFDRE IDRGS LNPGK QLF EK MVSGM YLGELVRLIL VKMAKEGLLF EGRITPELLT RGKFNTSDVS AIEKNKEGLH NAKEILTRLG VEPSDDDCVS VQHVCTIVSF RSANLVAATL GAILNRLRDN KGTPRLRTTV GVDGSLYKTH PQYSRRFHKT LRRLVPDSV RFLSESGSG KGAAMVTAVA YRLAEQHRQI EETLAHFHLT KDMLLEVKKR MRAEMELGLR KQTHNNAVVK MLPSFVR RTP DGTENGDFLA LDLGGTNFRV LLVKIRSGKK RTVEMHNKIY APIEIMQGT GEELFDHIVS CISDFLDYMG IKGPRMPLGF TFSFPCQOTS LDAGILITWT KGFKATDCVG HDVVTLRDA IKRREEFDLD VVAVVNDTVG TMMTCAYEEP TCEVGLIVGT GSNACYMEEM KNVEMVEGDQ GQMCINMEWG AFGDNGCLDD IRTHYDRLVD EYSLNAGKQR YEKMISGMYL GEIVRNILID FTKKGFLFRG QISETLKTRG IFETKFLSQI ESDRLALLQV RAILQQLGLN STCDD SILVK TVCGVVSRA AQLCGAGMAA VVDKIRENRG LDRLNVTGV DGTLYKLPH FSRIMHQTVK ELSPKCNVSF LLEDGSGKG AALITAVGVR LRTEASS

General References

Jon E. et al.,(2003) J.Exp Biology. 206 : 2049-2057.
 Furuta H. et al.,(1996) Genomics. 36(1):206-9.

DATA

SDS-PAGE



3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.