

Recombinant human Hexokinase 2 protein

Catalog Number: ATGP3790

PRODUCT INFORMATION

Expression system

E.coli

Domain

1-917aa

UniProt No.

P52789

NCBI Accession No.

NP_000180

Alternative Names

HKII, HXK2

PRODUCT SPECIFICATION

Molecular Weight

104.5 kDa (937aa)

Concentration

1mg/ml (determined by Bradford assay)

Formulation

Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 10% glycerol, 0.1M NaCl , 0.1mM PMSF

Purity

> 90% by SDS-PAGE

Endotoxin level

< 1 EU per 1ug of protein (determined by LAL method)

Biological Activity

Specific activity is > 40,000pmol/min/ug. One unit will convert 1pmole of D-Glucose to D-Glucose-6-phosphate per minute at pH8.0 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

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Description

Hexokinase2 is one of four highly homologous hexokinase isoforms in mammalian cells. 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. Hexokinase2 is found in the skeletal muscle and includes hydrophobic N-terminal sequence capable of targeting the hexokinase to mitochondria. Recombinant human Hexokinase2 protein, fused to His-tag at N-terminus, was expressed in E. coli and purified by using conventional chromatography techniques.

Amino acid Sequence

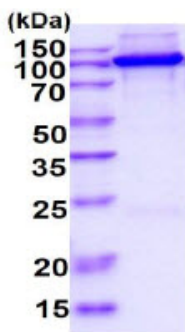
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 VKMLPTFVRS TPDGTEHGEF LALDLGGTNF RVLWVKVTDN GLQKVEMENQ IYAIPEIDMR GSGTQLFDHI AECLANFMDK
 LQIKDKKLPL GFTFSFPCHQ TKLDESFLVS WTKGFKSSGV EGRDVVALIR KAIQRRGDFD IDIVAVVNDT VGTMMTCGYD
 DHNCEIGLIV GTGSNACYME EMRHIDMVEG DEGRMCINME WGAFGDDGSL NDIRTEFDQE IDMGSLNPGK QLFKEMISGM
 YMGELVRLIL VKMAKEELLF GGKLSPELLN TGRFETKDIS DIEGEKDGIR KAREVLMRLG LDPTQEDCVA THRICQIVST
 RSASLCAATL AAVLQRIKEN KGEERLRSTI GVDGSVYKHH PHFAKRLHKT VRRLVPGCDV RFLRSEDGSG KGAAMVTAVA
 YRLADQHRAR QKTLEHLQLS HDQLLEVKRR MKVEMERGLS KETHASAPVK MLPTYVCATP DGTEKGDFLA LDLGGTNFRV
 LLVRVRNGKW GGVEMHNKIY AIPQEVMHGT GDELFDHIVQ CIADFLEYMG MKGVSLPLGF TFSFPCQNS LDESILLKWT
 KGFKASGCEG EDVVTLLKEA IHRREEFDLD VVAVVNDTVG TMMTCGFEDP HCEVGLIVGT GSNACYMEEM RNVELVEGEE
 GRMCVNMEWG AFGDNGCLDD FRTEFDVAVD ELSLNPGKQR FEKMISSGMYL GEIVRNILID FTKRGLLFRG RISERLKTRG
 IFETKFLSQI ESDCLALLQV RAILQHLGLE STCDDSIIVK EVCTVARRA AQLCGAGMAA VVDRIRENRG LDALKVTVGV
 DGTLYKLPHH FAKVMHETVK DLAPKCDVSF LQSEDGSGKG AALITAVACR IREAGQR

General References

Travis SM. et al. (1997) FEBS Lett. 412(3):415-9
 Brautigam D.L. et al. (2005) Biochemistry 44(33):11067-73.

DATA

SDS-PAGE



15% SDS-PAGE (3ug)

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