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

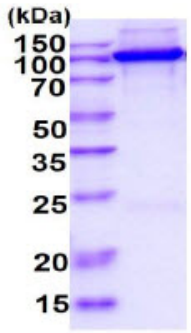
MGSSHHHHHH SSGLVPRGSH MIASHLLAYF FTELNHDQVQ KVDQYLYHMR LSDETLLEIS KRFRKEMEKG LGATTHPTAA VKMLPTFVRS TPDGTEHGEF LALDLGGTNF RVLWVKVTDN GLQKVEMENQ IYAIPEDIMR GSGTQLFDHI AECLANFMDK LQIKDKKLPL GFTFSFPCHQ TKLDESFLVS WTKGFKSSGV EGRDVVALIR KAIQRRGDFD IDIVAVVNDT VGTMMTCGYD DHNCEIGLIV GTGSNACYME EMRHIDMVEG DEGRMCINME WGAFGDDGSL NDIRTEFDQE IDMGSLNPGK QLFEKMISGM YMGELVRLIL VKMAKEELLF GGKLSPELLN TGRFETKDIS DIEGEKDGIR KAREVLMRLG LDPTQEDCVA THRICQIVST RSASLCAATL AAVLQRIKEN KGEERLRSTI GVDGSVYKKH PHFAKRLHKT VRRLVPGCDV RFLRSEDGSG KGAAMVTAVA YRLADQHRAR QKTLEHLQLS HDQLLEVKRR MKVEMERGLS KETHASAPVK MLPTYVCATP DGTEKGDFLA LDLGGTNFRV LLVRVRNGKW GGVEMHNKIY AIPQEVMHGT GDELFDHIVQ CIADFLEYMG MKGVSLPLGF TFSFPCQQNS LDESILLKWT KGFKASGCEG EDVVTLLKEA IHRREEFDLD VVAVVNDTVG TMMTCGFEDP HCEVGLIVGT GSNACYMEEM RNVELVEGEE GRMCVNMEWG AFGDNGCLDD FRTEFDVAVD ELSLNPGKQR FEKMISGMYL GEIVRNILID FTKRGLLFRG RISERLKTRG IFETKFLSQI ESDCLALLQV RAILQHLGLE STCDDSIIVK EVCTVVARRA AQLCGAGMAA VVDRIRENRG LDALKVTVGV DGTLYKLHPH FAKVMHETVK DLAPKCDVSF LQSEDGSGKG AALITAVACR IREAGQR

General References

Travis SM. et al. (1997) FEBS Lett. 412(3):415-9
Brautigan 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.