

Human Recombinant Hexokinase 2

CATALOG #:	6308-100	100 µg
ALTERNATE NAMES:	Hexokinase type II, Muscle form hexokinase, HK2.	
SOURCE:	E.Coli	
PURITY:	> 95% by SDS - PAGE	
MOL. WEIGHT:	104.1 kDa (937 aa – 1-917 aa + His Tag).	
FORMULATION:	1 mg/ml solution in 20 mM Tris-HCl buffer (pH 8.0) containing 10% glycerol.	

STORAGE CONDITIONS:

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

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 vertebrates there are four major glucose-phosphorylating isoenzymes, designated hexokinase I, II, III, and IV. This enzyme is found in most cells, but there is tissue specificity for the particular type of hexokinase. Hexokinase 2 is found in the skeletal muscle and includes hydrophobic N-terminal sequence capable of targeting the hexokinase to mitochondria. It also constitutes the principal regulated isoform in many other cell types and is increased in many cancers. Although found in NIDDM patients, genetic variations of HK 2 do not contribute to the disease.

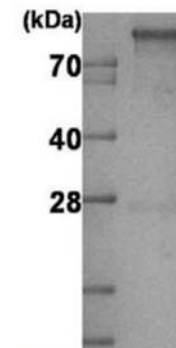
AMINO ACID SEQUENCE:

MGSSHHHHHH SSGLVPRGSH MIASHLLAYF FTELNHQVQ KVDQYLYHMR LSEDTLLEIS
 KRFRKEMEGK LGATHTPTAA VKMLPTFVRS TPDGTEHGEF LALDLGGTTF
 RVLWVKVTDN GLQKVENENQ 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 GVDGSVYKKH PHFAKRLHKT
 VRRVLPVGDV RFLRSEDGSG KGAAMVTAVA YRLADQHRAR QKTLEHLQLS
 HDQLLEVKRR MKVEMERGLS KETHASAPVK MLPTYVCATP DGTEKGDFLA

LDLGGTNFRV LLVVRNGKW GGVEMHNKIY AIPQEVMHGT GDELFDHIVQ CIADFLEYMG
 MKGVSLPLGF TFSFPCQQNS LDESILLKWT KGFKASGCEG EDVVTLLKEA IHRREEFDLD
 VVAVVNDTVG TMMTCGFEDP HCEVGLIVGT GSNACYMEEM RNVELVEGEE
 GRMVCNMEWG AFGDNGCLDD FRTEFDVAVD ELSLNPQKQR FEKMGISMYL
 GEIVRNILID FTKRGLLFRG RISERLKTGR IFETKFLSQI ESDCLALLQV RAILQHLGLE
 STCDDSIIVK EVCTVVARA AQLCGAGMAA VVDRIENRG LDALKVTVG DGTLYKLHPH
 FAKVMHETVK DLAPKCDVSF LQSEDGSGKG AALITAVACR IREAGQR

BIOLOGICAL ACTIVITY:

Specific activity is 3-4 units/ml obtained by measuring the increase of NADPH in absorbance at 340 nm resulting from the reduction of NADP. In the coupled mode, one unit will produce 1.0 µmole of NADPH per minute as glucose is phosphorylated by ATP at pH 7.4 at 25°C.



12% SDS-PAGE (3µg)

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RELATED PRODUCTS:

- Hexokinase Colorimetric assay kit (Cat. No. K789-100)
- HK2 (Hexokinase II) (Center) Antibody (Cat. No. 3145-100)
- HK2 (Hexokinase II) (NT) Antibody (Cat. No. 3144-100)
- HK3 (Hexokinase III) (CT) Antibody (Cat. No. 3143-100)
- HK3 (Hexokinase III) (Center) Antibody (Cat. No. 3198-100)

FOR RESEARCH USE ONLY! Not to be used in humans.