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**Product Data Sheet**


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Product Name: HK2 Human  
 Cat. No.: GP22529  
 Batch No.: 1

**Product Data**

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	Hexokinase-2; EC 2.7.1.1; HK2; Hexokinase type II; HK II; Muscle form hexokinase; HXK2; DKFZp686M1669.		
Amino Acid Sequence	<p>MGSSHHHHHH SSGLVPRGSH MIASHLLAYF FTELNHDQVQ KVDQYLYHMR          LSETLLEIS KRFRKEMEK G LGATTHPTAA VKMLPTFVRS TPDGTEHGEF          LALDLGGTNF RVLWVKVTDN GLQKVEMENQ IYAIPEDIMR GSGTQLFDHI          AECLANFMDK LQIKDKKLPL GFTFSFPCHQTKLDESFLVS WTKGFKSSGV          EGRDVVALIR KAIQRRGDFD IDIVAVVNDT VGTMMTCGYD DHNCEIGLIV          GTGSNACYME EMRHIDMVEG DEGRMCINME WGAFGDDGSL NDIRTEFDQE          IDMGSLNPGK QLFKEMISGM YMGELVRLIL VKMAKEELLF GGKLSPELLN          TGRFETKDISDIEGEKDGIR KAREVLMRLG LDPTQEDCVA THRICQIVST          RSASLCAATL AAVLQRIKENKGEERLRSTI GVDGSVYKXH PHFAKRLHKT          VRRLLVPGCDV RFLRSEDGSG KGAAMVTAVAYRLADQHRAR QKTLEHLQLS          HDQLLEVKRR MKVEMERGLS KETHASAPVK MLPTYVCATPDGTEKGDFLA          LDLGGTNFRV LLVRVRNGKW GGVEMHNKIY AIPQEVMHGT GDELFDHIVQ          CIADFLEYM G MKGVSLPLGF TFSFPCQQNS LDESILLKWT KGFKASGCEG          EDVVTLLKEA IHRREEFDLD VVAVVNDTVG TMMTCGFEDP HCEVGLIVGT          GSNACYMEEM RNVELVEGEE GRMCVNM EWG AFGDNGCLDD FRTEFDVAVD          ELSLNP GKQR FEKMISGMYL GEIVRNILID FTKRGLLFRG RISERLKTRG          IFETKFLSQI ESDCLALLQV RAILQHLGLE STCDDSIIVK EVCTVARRA          AQLCGAGMAA VVDRIENRG LDALKVTVGV DGTLYKLHPH FAKVMHETVK          DLAPKCDVSF LQSEDGSGKG AALITAVACR IREAGQR.</p>		
Formulation	The protein (1mg/ml) contains 20mM Tris-HCl pH8.0 and 10% glycerol.		

**Introduction**

Hexokinases phosphorylate glucose to produce glucose-6-phosphate, thus committing

**Caution: Product has not been fully validated for medical applications. For research use only.**

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glucose to the glycolytic pathway. Hexokinase 2 is the predominant form found in skeletal muscle. It localizes to the outer membrane of mitochondria. Expression of this gene is insulin-responsive, and studies in rat suggest that it is involved in the increased rate of glycolysis seen in rapidly growing cancer cells.

### 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 umole of NADPH per minute as glucose is phosphorylated by ATP at pH 7.4 at 30C.

### Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please avoid freeze-thaw cycles.

### Background

HK2 Human Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain (aa 1-917) fused to a 20 His tag at the N-terminal encoding the sequence of 937 amino acids in total and having a molecular mass of 104.1 kDa. HK2 is purified by proprietary chromatographic techniques.

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