

## 32-3029: HK-1 Recombinant Protein

**Alternative Name :** Hexokinase-1, EC 2.7.1.1, Hexokinase type I, HK I, Brain form hexokinase, HK1-ta, HK1-tb, HXK1, HK1.

### Description

Source : Escherichia Coli. HK1 Human Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain fused to 20 amino acids His tag at the N-terminal encoding the sequence of 937 amino acids and having a molecular mass of 104.6 kDa. HXK1 is purified by proprietary chromatographic techniques. Hexokinases phosphorylate glucose to produce glucose-6-phosphate, thus committing glucose to the glycolytic pathway. Hexokinase1 encodes a ubiquitous form of hexokinase which localizes to the outer membrane of mitochondria. Mutations in this gene have been associated with hemolytic anemia due to hexokinase deficiency. Alternative splicing of HXK1 results in five transcript variants which encode different isoforms, some of which are tissue-specific. Each isoform has a distinct N-terminus; the remainder of the protein is identical among all the isoforms. A sixth transcript variant has been described, but due to the presence of several stop codons, it is not thought to encode a protein.

### Product Info

<b>Amount :</b>	10 µg
<b>Purification :</b>	Greater than 90.0% as determined by SDS-PAGE.
<b>Content :</b>	The protein (1mg/ml) contains 20mM Tris pH8.0 and 10% glycerol.
<b>Storage condition :</b>	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 it is recommended to add a carrier protein (0.1% HSA or BSA). Please avoid freeze-thaw cycles.
<b>Amino Acid :</b>	MGSSHHHHHH SSGLVPRGSH MIAAQLLAY FTELKDDQVK KIDKLYAMR LSETLIDIM TRFRKEMKNG LSRDFNPTAT VKMLPTFVRS IPDGSEKGF IALDLGGSSF RILRVQVNHE KNQNVHMESE VYDTPENIVH GSGSQLFDHV AECLGDFMEK RKIKDKKLPV GFTFSFPCQK SKIDEAILIT WTKRFKASGV EGADVVKLLN KAIKKRGDYD ANIVAVVNDT VGTMMTCGYD DQHCEVGLII GTGTNACYME ELRHIDLVEG DEGRMCINTE WGAFGDDGSL EDIRTEFDRE IDRGLNPGK QLFKEMVSGM YLGELVRLIL VKMAKEGLLF EGRITPELLT RGKFNSTSDVS AIEKNKEGLH NAKEILTRLG VEPSDDDCVS VQHVCTIVSF RSANLVAATL GAILNRLRDN KGTPLRRTTV GVDGSLYKTH PQYSRRFHKT LRRLVPDSDV RFLLESEGSG KGAAMVTAVA YRLAEQHRQI EETLAHFHLT KDMLEVKKR MRAEMELGLR KQTHNNAVVK MLPSFVRRT DGTENGDFLA LDLGGTNFRV LLVKIRSGKK RTVEMHNKIY AIPIEIMQGT GEELFDHIVS CISDFLDYMG IKGPRMPLGF TFSFPCQQT LDAGILITWT KGFKATDCVG HDVVTLLRDA IKRREEFDLD VVAVVNDTVG TMMTCAYEEP TCEVGLIVGT GSNACYMEEM KNVEMVEGDQ GQMCINMEWG AFGDNGCLDD IRTHYDRLVD EYSLNAGKQR YEKMISGMYL GEIVRNILID FTKKGFLFRG QISETLKTRG IFETKFLSQI ESDRLALLQV RAILQQGLN STCDDSDLVK TVCVVSRRA AQLCGAGMAA VVDKIRENRG LDRLNVTGV DGTLYKLPH FSRIMHQTVK ELSPKCNVSF LLEDGSGKG AALITAVGVR LRTEASS.

### Application Note

Specific activity is >2 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 25°C.

