

Bioactive

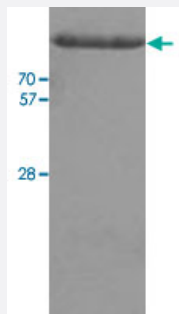
Full-Length

HK2 (Human) Recombinant Protein

Catalog # P3457

Size 100 ug

Applications



Specification

Product Description

Human HK2 (NP_000180, 1 a.a. - 917 a.a.) full-length recombinant protein with His tag expressed in *Escherichia coli*.

Sequence

MGSSHHHHHHSSGLVPRGSHMIASHLLAYFFTELNHDQVQKVDQYLYHMRLSDETLLEISKRFRK
 EMEKGLGATTHPTAAVKMLPTFVRSTPDGTEHGEFLALDLGGTNFRVLWVKVTDNGLQKVEMEN
 QIYAIPEDIMRSGTQLFDHIAECLANFMDKLQIKDKKLPLGFTFSFPCHQTKLDESFLVSWTKGFK
 SSGVEGRDVVALIRKAIQRRGDFDIDVAVVNDTVGTMTCGYDDHNCEIGLVGTGSNACYMEEM
 RHIDMVEGDEGRMCINMEWGAFGDDGSLNDRTEFDQEIDMGSLNPGKQLFEKMISGMYMGELV
 RLILVKMAKEELLFGGKLSPELLNTGRFETKDISDIEGEKDGIRKAREVLMRLGLDPTQEDCVATHR
 ICQVSTRSASLCAATLA AVLQRIKENKGEERLRSTIGVDGSVYKKHPHFAKRLHKTVRRLVPGCD
 VRFLRSEDGSGKGAAMVTAVAYRLADQHRARQKTLHLQLSHDQLLEVKRRMKVEMERGLSKE
 THASAPVKMLPTYVCATPDGTEKGDFLALDLGGTNFRVLLVRVRNGKWGGVEMHNKIYAIQEV
 MHGTGDELFDHIVQCIADFLEYMGMGVSLPLGFTFSFPCCQQNSLDESILLKWTGFKASGCEGE
 DVVTLLKEAIHREEFDLDVAVVNDTVGTMTCGFEDPHCEVGLVGTGSNACYMEEMRNVEL
 VEGEEGRMCVNMEWGAFGDNGLDDFRTEFDVAVDELSLNP GKQRF EK MISGMYLG E V R N I L I
 DFTKRGLLFRGRISERLKTGRIFETKFLSQIESDCLALLQVRAILQHLGLESTCDDSIIVKEVCTVVAR
 RAAQLCGAGMAAVVDRIENRGLDALKVTVGVDGTLTKLHPHFAKVMHETVKDLAPKCDVSFLQ
 SEDGSGKGAALITAVACRIREAGQR

Host

Escherichia coli

Theoretical MW (kDa)

104.1

Form

Liquid

Preparation Method	<i>Escherichia coli</i> expression system
Purification	Conventional Chromatography
Concentration	1 mg/mL
Purity	> 85% by SDS-PAGE
Activity	Specific activity is > 12,000 pmol/min/ug. One unit will convert 1 pmoles of D-Glucose to D-Glucose-6-phosphate per minute at pH 8.0 at 37°C.
Quality Control Testing	Loading 3 ug protein in 12% SDS-PAGE
Storage Buffer	In 20 mM Tris-HCl, pH 8.0 (10% glycerol).
Storage Instruction	Store at 2°C to 8°C for 1 week. For long term storage, aliquot and store at -20°C to -80°C. Aliquot to avoid repeated freezing and thawing.

Applications

- Functional Study
- SDS-PAGE

Gene Info — HK2

Entrez GeneID	3099
Protein Accession#	NP_000180
Gene Name	HK2
Gene Alias	DKFZp686M1669, HKII, HXK2
Gene Description	hexokinase 2
Omim ID	601125
Gene Ontology	Hyperlink
Gene Summary	Hexokinases phosphorylate glucose to produce glucose-6-phosphate, the first step in most glucose metabolism pathways. This gene encodes hexokinase 2, 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. [provided by RefSeq]

Pathway

- [Amino sugar and nucleotide sugar metabolism](#)
- [Biosynthesis of alkaloids derived from histidine and purine](#)
- [Biosynthesis of alkaloids derived from ornithine](#)
- [Biosynthesis of alkaloids derived from shikimate pathway](#)
- [Biosynthesis of alkaloids derived from terpenoid and polyketide](#)
- [Biosynthesis of phenylpropanoids](#)
- [Biosynthesis of plant hormones](#)
- [Biosynthesis of terpenoids and steroids](#)
- [Fructose and mannose metabolism](#)
- [Galactose metabolism](#)
- [Glycolysis / Gluconeogenesis](#)
- [Insulin signaling pathway](#)
- [Metabolic pathways](#)
- [Starch and sucrose metabolism](#)
- [Streptomycin biosynthesis](#)
- [Type II diabetes mellitus](#)