

HK3 Protein, Human, Recombinant (His & GST)

General Information

Synonyms:	HXK3;HKIII;hexokinase 3 (white cell)
Protein Construction:	A DNA sequence encoding the human HK3 (P52790) (Met 1-Val 923) was fused with the N-terminal polyhistidine-tagged GST tag at the N-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	Baculovirus Insect Cells
Accession:	P52790
Molecular Weight:	127 kDa (predicted); 115 kDa (reducing conditions)

QC Testing

Biological Activity:	Kinase activity untested
Purity:	> 85 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/ μ g of the protein as determined by the LAL method.
Formulation:	Supplied as sterile 50 mM Tris, 100 mM NaCl, pH7.4, 25% glycerol, 0.5 mM PMSF, 0.1 mM EDTA, 0.5 mM GSH.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store the product under sterile conditions at -20°C to -80°C . Samples are stable for up to 12 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

Proteins are shipped with blue ice.

Protein Background

Hexokinase-3, also known as Hexokinase type III, HKIII, and HK3, is a protein that belongs to the hexokinase family. Hexokinase-3 / HK3 is an enzyme that in humans is encoded by the HK2 gene. Hexokinases phosphorylate glucose to produce glucose 6-phosphate, committing glucose to the glycolytic pathway. In mammalian tissues, hexokinase exists as four isoenzymes encoded by distinct genes. These proteins are homologous and are organized in two homologous domains, except for hexokinase type IV which has only one. This organization is believed to be the result of a duplication and tandem fusion event involving the gene encoding for the ancestral hexokinase. The gene encodes hexokinase-3. Similar to hexokinases-1 and hexokinases-2, this allosteric enzyme is inhibited by its product glucose 6-phosphate.

Reference

Palma F. et al., 1996, Mol Cell Biochem. 155: 23-9.

Furuta H. et al.,1996, Genomics. 36 (1): 206-9.

Colosimo A. et al.,1996, Cytogenet Cell Genet. 74 (3): 187-8.

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