

IP6K1/IHPK1 Protein, Human, Recombinant (His & GST)

General Information

Synonyms:	inositol hexakisphosphate kinase 1;IHPK1;PiUS
Protein Construction:	A DNA sequence encoding the human IHPK1 (Q92551-1) (Met1-Gln441) 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:	Q92551-1
Molecular Weight:	78 kDa (predicted); 88 kDa (reducing conditions)

QC Testing

Biological Activity:	Kinase activity untested
Purity:	> 85 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Supplied as sterile 20 mM Tris, 500 mM NaCl, pH 8.0, 10% gly.

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

IP6K1 (Inositol Hexakisphosphate Kinase 1) is a Protein Coding gene. 2 alternatively spliced human isoforms have been reported. IHPK1 is an inositol hexaphosphate kinase (IHPK) protein that belongs to the inositol phosphokinase (IPK) family. IHPK proteins are likely responsible for the conversion of inositol hexakisphosphate (InsP6) to diphosphoinositol pentakisphosphate (InsP7/PP-InsP5). IHPK1 may also convert 1,3,4,5,6-pentakisphosphate (InsP5) to PP-InsP4 and affect the growth-suppressive and apoptotic activities of interferon-beta in some ovarian cancers. During cell death, IHPK1 activity is enhanced, and the intracellular InsP7 level is augmented. The distribution of IHPK1 or another predisposing gene affected by the position effect of translocation may explain the T2DM phenotype at least in this family.

Reference

Strausberg RL, et al. (2003) Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences. Proc Natl Acad Sci. 99(26):16899-903.

Saiardi A, et al. (2001) Identification and characterization of a novel inositol hexakisphosphate kinase. J Biol Chem. 276(42):39179-85.

Kamimura J, et al. (2004) The IHPK1 gene is disrupted at the 3p21.31 breakpoint of t(3;9) in a family with type 2 diabetes mellitus. J Hum Genet. 49(7):360-5.

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