

Active Recombinant Human GPI Protein, His-tagged

Cat. No. GPI-387H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human GPI, fused to His-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography techniques.
Species	Human
Source	E.coli
Description	Glucose-6-phosphate isomerase, also known as GPI, belongs to the GPI family whose members encode multifunctional phosphoglucose isomerase proteins involved in energy pathways. The protein encoded by this gene is a dimeric enzyme that catalyzes the reversible isomerization of glucose-6-phosphate and fructose-6-phosphate. Mammalian GPI can function as a tumor-secreted cytokine and an angiogenic factor (AMF) that stimulates endothelial cell motility. GPI is also a neurotrophic factor (Neuroleukin) for spinal and sensory neurons.
Form	Liquid. In 20mM Tris-HCl buffer (pH8.0) containing 1mM DTT, 10% glycerol.
Bio-activity	Specific activity is >400 units/mg obtained by measuring the increase of NADPH in absorbance at 340 nm resulting from the reduction of NADP. One unit will convert 1.0 umole of D-Fructose 6-phosphate to D-glucose 6-phosphate per minute at pH 7.4 at 37C.
Molecular Mass	65.3kDa (578aa), confirmed by MALDI-TOF
AA Sequence	MGSSHHHHHH SSGLVPRGSH MAALTRDPQF QKLQQWYREH RSELNLRRLF

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DANKDRFNHF SLTLNTNHGH ILVDYSKNLV TEDVMRMLVD LAKSRGVEAA
 RERMFNGEKI NYTEGRAVLH VALRNRSNTP ILVDGKDVMV EVNKVLDKMK
 SFCQVRVSGD WKGYTGKTIT DVINIGIGGS DLGPLMVTEA LKPYSSGGPR
 VWYVSNIDGT HIAKTLAQLN PESSLFIIAS KTFTTQETIT NAETAKEWFL
 QAAKDPSAVA KHFVALSTNT TKVKEFGIDP QNMFEFWDWV GGRYSLWSAI
 GLSIALHVGF DNFEQLLSGA HWMDQHFRTT PLEKNAPVLL ALLGIWYINC
 FGCETHAMLP YDQYLHRFAA YFQQGDMESN GKYITKSGTR VDHQTGPIVW
 GEPGTNGQHA FYQLIHQGTK MIPCDFLIPV QTQHPIRKGL HHKILLANFL
 AQTEALMRGK STEEARKELQ AAGKSPEDLE RLLPHKVFEQ NRPTNSIVFT
 KLTPFMLGAL VAMYEHKIFV QGIIWDINSF DQWGVELGKQ LAKKIEPELD
 GSAQVTSHDA STNGLINFIK QQREARVQ

Endotoxin < 1.0 EU per 1 microgram of protein (determined by LAL method)

Purity >95% by SDS - PAGE

Storage Can be stored at +4 centigrade short term (1-2 weeks). For long term storage, aliquot and store at -20 centigrade or -70 centigrade. Avoid repeated freezing and thawing cycles.

Concentration 1mg/ml (determined by Bradford assay)

GENE INFORMATION

Gene Name GPI glucose-6-phosphate isomerase [Homo sapiens]

Official Symbol GPI

Synonyms GPI; glucose-6-phosphate isomerase; glucose phosphate isomerase; AMF; NLK; neuroleukin; oxoisomerase; sperm antigen 36; sperm antigen-36; phosphohexomutase; phosphosaccharomutase; phosphohexose isomerase;

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	phosphoglucose isomerase; autocrine motility factor; hexosephosphate isomerase; hexose monophosphate isomerase; PGI; PHI; GNPI; SA36; SA-36; DKFZp686C13233;
Gene ID	2821
mRNA Refseq	NM_000175
Protein Refseq	NP_000166
MIM	172400
UniProt ID	P06744
Chromosome Location	19q13.1
Pathway	Amino sugar and nucleotide sugar metabolism, organism-specific biosystem; Amino sugar and nucleotide sugar metabolism, conserved biosystem; Gluconeogenesis, organism-specific biosystem; Glucose metabolism, organism-specific biosystem; Glycolysis, organism-specific biosystem; Glycolysis (Embden-Meyerhof pathway), glucose =>pyruvate, organism-specific biosystem;
Function	cytokine activity; glucose-6-phosphate isomerase activity; glucose-6-phosphate isomerase activity; growth factor activity; isomerase activity;