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**Product Data Sheet**


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Product Name: GPI Human  
 Cat. No.: GP21717  
 Batch No.: 1

**Product Data**

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	Glucose-6-phosphate isomerase; Phosphoglucose isomerase; Phosphohexose isomerase; Autocrine motility factor; Neuroleukin; Sperm antigen 36; GPI; PGI; PHI; AMF; NLK; SA-36; GNPI.		
Amino Acid Sequence	MGSSHHHHHH SGLVPRGSH MAALTRDPQF QKLQQWYREH RSELNLRRLF DANKDRFNHF SLTLNTNHGH ILVDYSKNLV TEDVMRMLVD LAKSRGVEAA RERMFNGEKI NYTEGRAVLH VALRNRSNTF ILVDGKDVMP EVNKVLDKMK SFCQRVRS GD WKG YTGKTIT DVINIGIGGS DLGPLMVTEA LKPYSSGGPR VWYVSNIDGT HIAKTLAQLN PESSLFIAS KTFTTQETIT NAETAKEWFL QAAKDPSAVA KH FVALSTNT TKVKEFGIDP QNMF EFWDWV GGRYSLWSAI GLSIALHVGF DNFEQLLSGA HWMDQHFRTT PLEKNAPVLL ALLGIWYINC FGCETHAMLP YDQYLHRFAA YFQQGD MESN GKYITKSGTR VDHQTGP I WV GEPGTNGQHA FYQLIHQGTK MIPCDFLIPV QTQHPIRKGL HHKILLANFL AQTEALMRGK STEEARKELQ AAGKSPEDLE RLLPHKVFEG NRPTNSIVFT KLTPFMLGAL VAMYEHKIFV QGIIWDINSF DQWGVELGKQ LAKKIEPELD GSAQVTSHDA STNGLINFIK QQREARVQ.		
Formulation	The GPI solution (1mg/ml) contains 20mM Tris-HCl buffer (pH8.0), 1mM DTT and 10% glycerol.		

**Introduction**

Glucose-6-phosphate isomerase (GPI) is a part of the GPI family whose members encode multifunctional phosphoglucose isomerase proteins involved in energy pathways. GPI is a dimeric enzyme which catalyzes the reversible isomerization of glucose-6-phosphate and fructose-6-phosphate. Mammalian GPI also functions as a tumor-secreted cytokine and an angiogenic factor (AMF) which stimulates endothelial cell motility. In addition, GPI is a neurotrophic factor (Neuroleukin) for spinal and sensory neurons. GPI performs

**Caution: Product has not been fully validated for medical applications. For research use only.**

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in different capacities inside and outside the cell. In the cytoplasm, GPI is involved in glycolysis and gluconeogenesis, while outside the cell it acts as a neurotrophic factor for spinal and sensory neurons. Defects in the GPI gene cause the nonspherocytic hemolytic anemia and a severe enzyme deficiency can be linked to hydrops fetalis, immediate neonatal death and neurological impairment.

### Stability

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 storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

### Background

GPI Human Recombinant fused with a 20 amino acid His tag at N-terminus produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 578 amino acids (1-558 a.a.) and having a molecular mass of 65.3kDa. The GPI is purified by proprietary chromatographic techniques.

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