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Certificate of Analysis and Data Sheet

Recombinant Human Glucose-6-Phosphate Isomerase (GPI)

Catalog No.

228-10568

Source:

Escherichia Coli.

Synonyms

Glucose-6-phosphate isomerase, Phosphoglucose isomerase, Phosphohexose isomerase, Autocrine motility factor, Neuroleukin, Sperm antigen 36, GPI, PGI, PHI, AMF, NLK, SA-36, GNPI.

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 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.

Description

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.

Physical Appearance

Sterile Filtered colorless solution.

Formulation

The GPI solution contains 20mM Tris-HCl buffer (pH8.0), 1mM DTT and 10% glycerol.

Stability

GPI although stable 4°C for 4 weeks, should be stored desiccated below -18°C.

For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

Please prevent freeze-thaw cycles.

**The products are furnished for LABORATORY RESEARCH USE ONLY.
Not for diagnostic or therapeutic use.**



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Purity

Greater than 95.0% as determined by SDS-PAGE.

Amino acid sequence

MGSSHHHHHH	SSGLVPRGSH	MAALTRDPQF	QKLQQWYREH	RSENLRLRLF	DANKDRFNHF
SLTLNTNHGH	ILVDYSKNLV	TEDVMRMLVD	LAKSRGVEAA	RERMFNGEKI	NYTEGRAVLH
VALRNRSNTP	ILVDGKDVMF	EVNKVLDKMK	SFCQVRVSGD	WKGYTGKTIT	DVINIGIGGS
DLGPLMVTEA	LKPYSSGGPR	VWYVSNIDGT	HIAKTLAQLN	PESSLFIIAS	KTFTTQETIT
NAETAKEWFL	QAAKDPSAVA	KHFVALSTNT	TKVKEFGIDP	QNMFEFWDWV	GGRYSLWSAI
GLSIALHVGF	DNFEQLLSGA	HWMDQHFRTT	PLEKNAPVLL	ALLGIWYINC	FGCETHAMLP
YDQYLHRFAA	YFQQGDMESE	GKYITKSGTR	VDHQTGPVW	GEPGTNGQHA	FYQLIHQGTK
MIPCDFLIPV	QTQHPIRKGL	HHKILLANFL	AQTEALMRGK	STEEARKELQ	AAGKSPEDLE
RLLPHKVFEF	NRPTNSIVFT	KLTPFMLGAL	VAMYEHKIFV	QGIIWDINSF	DQWGVELGKQ
LAKKIEPELD	GSAQVTSHDA	STNGLINFIK	QQREARVQ		

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