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## **GPI Human**

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.

Catalog #:ENPS-437

For research use only.

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

Source: Escherichia Coli.

Physical Appearance: Sterile Filtered colorless solution.

Amino Acid Sequence: MGSSHHHHHH SSGLVPRGSH MAALTRDPQF QKLQQWYREH RSELNLRRLF DANKDRFNHF SLTLNTNHGH ILVDYSKNLV TEDVMRMLVD LAKSRGVEAA RERMFNGEKI NYTEGRAVLH VALRNRSNTP ILVDGKDVMP EVNKVLDKMK SFCQRVRSGD WKGYTGKTIT DVINIGIGGS DLGPLMVTEA LKPYSSGGPR VWYVSNIDGT HIAKTLAOLN PESSLFIIAS KT

Purity: Greater than 95.0% as determined by SDS-PAGE.

#### Formulation:

The GPI solution contains 20mM Tris-HCI 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.

# Usage:

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

## 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.

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