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**Product Data Sheet**


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Product Name: BPGM Human  
 Cat. No.: GP21447  
 Batch No.: 1

**Product Data**

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	Bisphosphoglycerate mutase; EC 5.4.2.4; BPGM; 2;3-bisphosphoglycerate mutase erythrocyte; 2;3-bisphosphoglycerate synthase; BPG-dependent PGAM.		
Amino Acid Sequence	MSKYKLIMLR HGEGAWNKEN RFCSWVDQKL NSEGMEEARN CGKQLKALNF EFDLVFTSVL NRSIHTAWLI LEELGQEWVP VESSWRLNERHYGALIGLNR EQMALNHGEE QVRLWRRSYN VTPPPIEESH PYYQEIYNDR RYKVC DVPLD QLP RSESLKD VLERLLPYWN ERIAPEVLRG KTLISAHGN SSRALLKHLE GISDEDIINI TLPTGVPILL ELDENLRAVG PHQFLGDQEA IQAAIKKVED QGKVKQAKKL EHHHHHHH.		
Formulation	The BPGM solution contains 20mM Tris-HCl pH-8, 1mM DTT, and 10% glycerol.		

**Introduction**

BPGM is found at high concentrations in red blood cells where it binds to and decreases the oxygen affinity of hemoglobin. PGM deficiency increases the oxygen affinity of cells. BPGM is a multifunctional enzyme that catalyzes 2,3-DPG synthesis through its synthetase activity, and 2,3-DPG degradation using its phosphatase activity. BPGM has phosphoglycerate phosphomutase activity. Mutations in BPGM cause hemolytic anemia. BPGM catalyzes the reaction of EC 5.4.2.1 (mutase) and EC 3.1.3.13 (phosphatase), but with a reduced activity.

**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.

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

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### Background

BPGM Human Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 267 amino acids (1-259 a.a.) and having a molecular mass of 31 kDa. The BPGM is fused to an 8 amino acid His Tag at C-Terminus and purified by proprietary chromatographic techniques.

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