

BPGM Protein, Human (His)

Cat. No.:	HY-P7665
Synonyms:	rHuBPGM, His; BPGM; Bisphosphoglycerate Mutase;
Species:	Human
Source:	E. coli
Accession:	P07738 (S2-K259)
Gene ID:	669
Molecular Weight:	Approximately 30.0 kDa

PROPERTIES

AA Sequence	<p> S K Y K L I M L R H G E G A W N K E N R F C S W V D Q K L N S E G M E E A R N C G K Q L K A L N F E F D L V F T S V L N R S I H T A W L I L E E L G Q E W V P V E S S W R L N E R H Y G A L I G L N R E Q M A L N H G E E Q V R L W R R S Y N V T P P P I E E S H P Y Y Q E I Y N D R R Y K V C D V P L D Q L P R S E S L K D V L E R L L P Y W N E R I A P E V L R G K T I L I S A H G N S S R A L L K H L E G I S D E D I I N I T L P T G V P I L L E L D E N L R A V G P H Q F L G D Q E A I Q A A I K K V E D Q G K V K Q A K K H H H H H H </p>
Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Solution.
Formulation	Supplied as a 0.2 µm filter solution of 20 mM Tris, 1 mM DTT, pH 8.0.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	N/A
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background	<p> Bisphosphoglycerate mutase (BPGM) is an erythrocyte-specific tri-functional enzyme, catalyzing a series of intermolecular phosphoryl group transfer reactions. The main activity of BPGM is synthase, converting 1,3-bisphosphoglycerate (1,3-BPG) to 2,3-bisphosphoglycerate (2,3-BPG). The second activity is mutase, catalyzing the inter-conversion between 2-phosphoglycerate (2-PGA) and 3-phosphoglycerate (3-PGA). The third activity is phosphatase, hydrolyzing the 2,3-BPG to 3- </p>
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PGA or 2-PGA and a phosphate. BPGM is found in erythrocytes and placental cells, and it regulates the level of 2,3-BPG^[2].

REFERENCES

- [1]. Wang Y, et al. Seeing the process of histidine phosphorylation in human bisphosphoglycerate mutase. J Biol Chem. 2006;281(51):39642-39648.
- [2]. Chu WT, et al. Insights into the phosphatase and the synthase activities of human bisphosphoglycerate mutase: a quantum mechanics/molecular mechanics simulation. Phys Chem Chem Phys. 2014;16(9):3946-3954.
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Caution: Product has not been fully validated for medical applications. For research use only.

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