

# Bisphosphoglycerate Mutase

Human, BPGM

Expressed in *E.Coli*

Cat. No. CBCRY13

Lot. No. (See product label)

## BACKGROUND

Bisphosphoglycerate mutase is an erythrocyte-specific enzyme catalyzing a series of intermolecular phosphoryl group transfer reactions. Its main function is to synthesize 2,3-bisphosphoglycerate, the allosteric effector of hemoglobin.

## MOLECULAR DESCRIPTION

**Protein classification:** Isomerase

**Structure Weight:** 63399.57 Da

**Polymer:** 1

**Molecule:** Bisphosphoglycerate mutase

**Chains:** A, B

**Type:** polypeptide (L)

**Chain Length:** 271 amino acids

## CRYSTAL INFORMATION

**PDB ID:** [2HHJ](#)

**MMDB ID:** [53343](#)

**Source:** E.Coli

**Method:** X-Ray Diffraction

**Resolution:** 1.5 Å

**Ligand Chemical Component:** 3-phosphoglyceric acid; 2,3-diphosphoglyceric acid; cyclohexylammonium ion

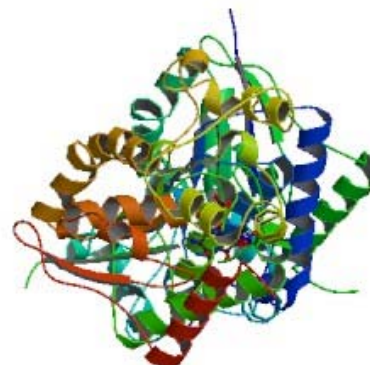
## RELATED PDB ENTRIES

[1T8P](#): The same protein complexed with no ligand.

[2H52](#): The same protein complexed with 3-phosphoglycerate

## FOR RESEARCH USE ONLY

## CRYSTAL STRUCTURE



## GENE INFORMATION

**Gene Name:** [BPGM](#)

**Synonyms:** EC 5.4.2.4; EC 5.4.2.1; EC 3.1.3.13; 2,3-bisphosphoglycerate mutase; 2,3-bisphosphoglycerate mutase, erythrocyte; 2,3-bisphosphoglycerate synthase; BPG-dependent PGAM

**UniProt ID:** [P07738](#)

**GeneID:** [669](#)

**Chromosome Location:** 7q31-q34

**Function:** bisphosphoglycerate 2-phosphatase activity; bisphosphoglycerate mutase activity; hydrolase activity; isomerase activity; phosphoglycerate mutase activity; intramolecular transferase activity; phosphatrasferase

## PRIMARY CITATION

Wang, Y., Liu, L., Wei, Z., Cheng, Z., Lin, Y., Gong, W. (2006) Seeing the process of histidine phosphorylation in human bisphosphoglycerate mutase. *J.Biol.Chem.* 281: 39642-39648

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