

Phosphoglycerate Mutase 1

Human, PGAM1

Expressed in *E.Coli*

Cat. No. CBCRY11

Lot. No. (See product label)

BACKGROUND

The B-type cofactor-dependent phosphoglycerate mutase (dPGM-B) catalyzes the interconversion of 2-phosphoglycerate and 3-phosphoglycerate in glycolysis and gluconeogenesis pathways using 2,3-bisphosphoglycerate as the cofactor. The crystal structures of human dPGM-B bound with citrate were determined in two crystal forms. These structures reveal a dimerization mode conserved in both of dPGM and BPGM (bisphosphoglycerate mutase), based on which a dPGM/BPGM heterodimer structure is proposed. Structural comparison supports that the conformational changes of residues 13-21 and 98-117 determine PGM/BPGM activity differences.

MOLECULAR DESCRIPTION

Protein classification: isomerase hydrolase

Structure Weight: 361525.84

Polymer: 1

Molecule: Phosphoglycerate mutase 1

Chains: A, B, C, D, E, F, G, H, I, J, K, L

Type: polypeptide (L)

Chain Length: 262 amino acids

CRYSTAL INFORMATION

PDB ID: [1YJX](#)

MMDB ID: [33356](#)

Source: E.Coli

Method: X-Ray Diffraction

Resolution: 2.8 Å

Ligand Chemical Component: citric acid; chloride ion

RELATED PDB ENTRIES

[1YFK](#): The same protein with different unit cell

FOR RESEARCH USE ONLY

CRYSTAL STRUCTURE



GENE INFORMATION

Gene Name: [PGAM1](#)

Synonyms: PGAMA; PGAM-B; PGAM1; RP11-452K12.8; OTTHUMP00000020190; OTTHUMP00000059414; phosphoglycerate mutase A, nonmuscle form; EC 5.4.2.1; EC 5.4.2.4; EC 3.1.3.13; BPG-dependent PGAM 1; Phosphoglycerate mutase isozyme B; phosphoglycerate mutase A, nonmuscle form

UniProt ID: [P18669](#)

GeneID: [5223](#)

Chromosome Location: 10q25.3

Function: bisphosphoglycerate 2-phosphatase activity; bisphosphoglycerate mutase activity; hydrolase activity; isomerase activity; phosphoglycerate mutase activity; protein kinase binding

PRIMARY CITATION

Wang, Y., Wei, Z., Liu, L., Cheng, Z., Lin, Y., Ji, F., Gong, W. (2005) Crystal structure of human B-type phosphoglycerate mutase bound with citrate. *Biochem.Biophys.Res.Commun.* 331: 1207-1215

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