BPGM Antibody (C-Term) Blocking Peptide

PRODUCT OVERVIEW

Product Name	BPGM, Blocking Peptide
Full Product Name	BPGM Antibody (C-term) Blocking peptide
Product Gene Name	BPGM blocking peptide
Product Synonym Names	Bisphosphoglycerate mutase; BPGM;3-bisphosphoglycerate mutase; erythrocyte;3-bisphosphoglycerate synthase;3-diphosphoglycerate mutase; DPGM; BPG-dependent PGAM; BPGM
Form/Format	Synthetic peptide was lyophilized with 100% acetonitrile and is supplied as a powder. Reconstitute with 0.1 ml DI water for a final concentration of 1 mg/ml.
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 6 months. For long term storage store at -20 degree C.
Antibody/Peptide Pairs	BPGM peptide (MBS9219269) is used for blocking the activity of BPGM antibody (MBS9204574)
Molecular Weight	30,005 Da
OMIM	222800
Tissue Location	Expressed in red blood cells. Expressed in non-erythroid cells of the placenta; present in the syncytiotrophoblast layer of the placental villi at the feto- maternal interface (at protein level)
Related Product Information for BPGM blocking peptide	Plays a major role in regulating hemoglobin oxygen affinity by controlling the levels of its allosteric effector 2,3-bisphosphoglycerate (2,3-BPG). Also exhibits mutase (EC 5.4.2.1) and phosphatase (EC 3.1.3.13) activities.
Other Notes	Small volumes of BPGM blocking peptide vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for BPGM purchase	MBS9219269 is a blocking peptide targeting BPGM. Also known as BPGM Antibody (C-term) Blocking peptide.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for BPGM. It may not necessarily be applicable to this product.

NCBI GI #	130350
NCBI GeneID	669
NCBI Accession #	P07738.2
UniProt Primary Accession #	P07738
UniProt Secondary Accession #	A4D1N9
UniProt Related Accession #	P07738
NCBI Official Full Name	Bisphosphoglycerate mutase
NCBI Official Synonym Full Names	bisphosphoglycerate mutase
NCBI Official Symbol	BPGM
NCBI Official Synonym Symbols	DPGM
UniProt Protein Name	Bisphosphoglycerate mutase
UniProt Synonym Protein Names	2,3-bisphosphoglycerate mutase, erythrocyte; 2,3-bisphosphoglycerate synthase (EC:3.1.3.13, EC:5.4.2.11); 2,3-diphosphoglycerate mutase; DPGM; BPG-dependent PGAM

Protein Family	Bisphosphoglycerate mutase
UniProt Gene Name	BPGM
UniProt Synonym Gene Names	BPGM; DPGM
UniProt Entry Name	PMGE_HUMAN
NCBI Protein Information	bisphosphoglycerate mutase
NCBI Summary for BPGM	2,3-diphosphoglycerate (2,3-DPG) is a small molecule found at high concentrations in red blood cells where it binds to and decreases the oxygen affinity of hemoglobin. This gene encodes a multifunctional enzyme that catalyzes 2,3-DPG synthesis via its synthetase activity, and 2,3-DPG degradation via its phosphatase activity. The enzyme also has phosphoglycerate phosphomutase activity. Deficiency of this enzyme increases the affinity of cells for oxygen. Mutations in this gene result in hemolytic anemia. Multiple alternatively spliced variants, encoding the same protein, have been identified. [provided by RefSeq, Sep 2009]
UniProt Comments for BPGM	BPGM: Plays a major role in regulating hemoglobin oxygen affinity by controlling the levels of its allosteric effector 2,3- bisphosphoglycerate (2,3-BPG). Also exhibits mutase (EC 5.4.2.1) and phosphatase (EC 3.1.3.13) activities. Defects in BPGM are the cause of bisphosphoglycerate mutase deficiency (BPGMD). A disease characterized by hemolytic anemia, splenomegaly, cholelithiasis and cholecystitis. Belongs to the phosphoglycerate mutase family. BPG- dependent PGAM subfamily. Protein type: Phosphatase (non-protein); EC 5.4.2.11; EC 5.4.2.4; Isomerase; EC 3.1.3.13; Carbohydrate Metabolism - glycolysis and gluconeogenesis Chromosomal Location of Human Ortholog: 7q33 Cellular Component: cytosol Molecular Function: 2,3-bisphosphoglycerate-dependent phosphoglycerate mutase activity; bisphosphoglycerate mutase activity Biological Process: gluconeogenesis; glucose metabolic process; glycolysis; regulation of pentose-phosphate shunt; respiratory gaseous exchange Disease: Bisphosphoglycerate Mutase Deficiency
Research Articles on BPGM	**1.** 1.94 A resolution X-ray structure of bisphosphoglycerate mutase is presented, focusing on the dynamic nature of key ligand-binding residues and their interaction with the inhibitor citrate
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