

Active Recombinant Human PGD Protein, His-tagged

Cat. No. PGD-393H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human PGD protein, fused to His-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography techniques.
Species	Human
Source	E.coli
Description	PGD (Phosphogluconate dehydrogenase), also known as 6PGD, is a 483 amino acid enzyme that is involved in the pentose phosphate shunt. Pentose is required for nucleic acid biosynthesis and the pentose phosphate cycle is a major source of NADPH. PGD deficiency increases the level of erythrocyte pyruvate kinase (PK) activity and reduces glutathione synthetase (GSH), resulting in hemolysis. Defects in PGD are generally asymptomatic and are inherited in an autosomal dominant fashion.
Form	Liquid. In 20 mM Tris-HCl buffer (pH8.0) containing 1mM DTT, 0.1M NaCl, 10% glycerol
Bio-activity	Specific activity is >10 units/mg, in which one unit oxidize 1.0 umole of 6-phospho-D-gluconate to D-ribulose 5-phosphate per minute at pH 8.0 at 25C, in the presence of β -NADP.
Molecular Mass	55.3 kDa (503aa)
AA Sequence	MGSSHHHHHH SSGLVPRGSH MAQADIALIG LAVMGQNLIL NMNDHGFVVC AFNRTVSKVD DFLANEAKGT KVVGAQSLKE MVSKLKKPRR IILLVKAGQA

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VDDFIEKLVP LLDTGDIID GGNSEYRDTT RRCRDLKAKG ILFVGSGVSG
 GEEGARYGPS LMPGGNKEAW PHIKTIFQGIAAKVGTGEPC CDWVGDEGAG
 HFVKMVHNGI EYGDMQLICE AYHLMKDVLG MAQDEMAQAF EDWNKTELD
 FLIEITANIL KFQD TDGKHL LPKIRDSAGQ KGTGKWT AIS ALEYGVPVTL
 IGEAVFARCL SSLKDERIQA SKKLKGPQKF QFDGDKKSFL EDIRKALYAS
 KIISYAQGFMLLRQAATEFG WTLNYGGIAL MWRGGCIIRS VFLGKIKDAF
 DRNPELQNLL LDDFFKSAVE NCQDSWRRRAV STGVQAGIPM PCFTTALSFY
 DGYRHEMLPA SLIQAQRDYF GAHTYELLAK PGQFIHTNWT GHGGTVSSSS YNA

Purity >90% by SDS - PAGE

Storage Can be stored at +4 centigrade short term (1-2 weeks). For long term storage, aliquot and store at -20 centigrade or -70 centigrade. Avoid repeated freezing and thawing cycles.

Concentration 1 mg/ml (determined by Bradford assay)

GENE INFORMATION

Gene Name PGD phosphogluconate dehydrogenase [Homo sapiens]

Official Symbol PGD

Synonyms PGD; phosphogluconate dehydrogenase; 6-phosphogluconate dehydrogenase, decarboxylating; 6PGD;

Gene ID 5226

mRNA Refseq NM_002631

Protein Refseq NP_002622

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MIM	172200
UniProt ID	P52209
Chromosome Location	1p36.22
Pathway	Glutathione metabolism, organism-specific biosystem; Glutathione metabolism, conserved biosystem; Metabolic pathways, organism-specific biosystem; Metabolism, organism-specific biosystem; Metabolism of carbohydrates, organism-specific biosystem; Pentose Phosphate Pathway, organism-specific biosystem; Pentose phosphate pathway, organism-specific biosystem;
Function	NADP binding; oxidoreductase activity; phosphogluconate dehydrogenase (decarboxylating) activity; phosphogluconate dehydrogenase (decarboxylating) activity;

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