

Recombinant Human Phosphogluconate Dehydrogenase, His-tagged

Cat. No. PGD-2034H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human Phosphogluconate Dehydrogenase protein, fused to His-tag at N-terminus, was expressed in <i>E.coli</i> and purified by using conventional chromatography techniques. MW=55.3 kDa (503aa).
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.
Sequences Of Amino Acids	MGSSHHHHHH SSGLVPRGSH MAQADIALIG LAVMGQNLIL NMNDHGFVVC AFNRTVSKVD DFLANEAKGT KVVGAQSLKE MVSKLKKPRR IILLVKAGQA VDDFIEKLVP LLDTGDIID GGNSEYRDTT RRCRDLKAKG ILFVGSGVSG GEEGARYGPS LMPGGNKEAW PHIKTIFQGI AAKVGTGEPC CDWVGDEGAG HFVKMVHNGI EYGDMQLICE AYHLMKDVLG MAQDEMAQAF EDWNKTELDS FLIEITANIL KFQDTDGKHL LPKIRDSAGQ KGTGKWTAS ALEYGVPVTL IGEAVFARCL SSLKDERIQA SKKLKGPQKF QFDGDKKSFL EDIRKALYAS KIISYAQGF MLLRQAATEFG WTLNYGGIAL MWRGGCIIRS VFLGKIKDAF

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DRNPQLNLL LDDFFKSAVE NCQDSWRRRAV STGVQAGIPM PCFTTALSFY
DGYRHEMLPA SLIQAQRDYF GAHTYELLAK PGQFIHTNWT GHGGTVSSSS YNA

Purity > 95% by SDS – PAGE.

Concentration 1 mg/ml (determined by Bradford assay).

Form Liquid. In 20 mM Tris-HCl buffer (pH8.0) containing 1mM DTT, 0.1M NaCl, 10% glycerol.

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

GENE INFORMATION

Gene Name [PGD phosphogluconate dehydrogenase \[Homo sapiens \]](#)

Synonyms PGD; phosphogluconate dehydrogenase; 6PGD; PGD; 6-phosphogluconate dehydrogenase; EC 1.1.1.44

Gene ID [5226](#)

mRNA Refseq [NM_002631](#)

Protein Refseq [NP_002622](#)

MIM [172200](#)

UniProt ID [P52209](#)

Chromosome 1p36.3-p36.13

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Location	
Pathway	Glutathione metabolism; Metabolic pathways; Pentose phosphate pathway; Metabolism of carbohydrates
Function	NADP or NADPH binding; oxidoreductase activity; phosphogluconate dehydrogenase (decarboxylating) activity; protein binding

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