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## Recombinant human 6-Phosphogluconate Dehydrogenase/PGD protein

Catalog Number: ATGP0504

### PRODUCT INFORMATION

## **Expression system**

E.coli

#### **Domain**

1-483aa

#### **UniProt No.**

P52209

#### **NCBI Accession No.**

NP 002622

#### **Alternative Names**

6-phosphogluconate dehydrogenase, Decarboxylating, PGDH, Phosphogluconate dehydrogenase, 6PGD

## **PRODUCT SPECIFICATION**

## **Molecular Weight**

55.3 kDa (503aa)

#### Concentration

1mg/ml (determined by Bradford assay)

#### **Formulation**

Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 1mM DTT, 0.1M Nacl, 10% glycerol

#### **Purity**

> 95% by SDS-PAGE

### Tag

His-Tag

## **Application**

SDS-PAGE

### **Storage Condition**

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

## **BACKGROUND**

## **Description**

PGD (Phosphogluconate dehydrogenas), 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. Recombinant human PGD protein, fused to His-tag at N-terminus, was expressed in E. coli and purified by using conventional chromatography techniques.



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## **Amino acid Sequence**

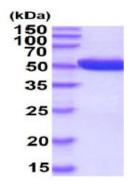
MGSSHHHHHH SSGLVPRGSH MAQADIALIG LAVMGQNLIL NMNDHGFVVC AFNRTVSKVD DFLANEAKGT KVVGAQSLKE MVSKLKKPRR IILLVKAGQA VDDFIEKLVP LLDTGDIIID GGNSEYRDTT RRCRDLKAKG ILFVGSGVSG GEEGARYGPS LMPGGNKEAW PHIKTIFQGI AAKVGTGEPC CDWVGDEGAG HFVKMVHNGI EYGDMQLICE AYHLMKDVLG MAQDEMAQAF EDWNKTELDS FLIEITANIL KFQDTDGKHL LPKIRDSAGQ KGTGKWTAIS ALEYGVPVTL IGEAVFARCL SSLKDERIQA SKKLKGPQKF QFDGDKKSFL EDIRKALYAS KIISYAQGFM LLRQAATEFG WTLNYGGIAL MWRGGCIIRS VFLGKIKDAF DRNPELQNLL LDDFFKSAVE NCQDSWRRAV STGVQAGIPM PCFTTALSFY DGYRHEMLPA SLIQAQRDYF GAHTYELLAK PGQFIHTNWT GHGGTVSSSS YNA

#### **General References**

Le TD., et al. (2010) Proc Natl Acad Sci u S A. 107(7):3198-203. Tagen M., et al. (2009) J Immunol. 183(10):6313-9.

## **DATA**

#### **SDS-PAGE**



15% SDS-PAGE (3ug)

3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.

