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## Product Data Sheet

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Product Name: PGD Human, Active

Cat. No.: GP26172

Batch No.: 1

**Product Data**

Purity &gt;98% Source Escherichia Coli.

Physical Appearance solid Shipping Condition withIcePacks

Synonyms EC 1.1.1.44, 6PGD, PGDH, 6-phosphogluconate dehydrogenase decarboxylating, PGD.

Amino Acid Sequence  
 MGSSHHHHH SSGLVPRGSH MAQADIALIG LAVMGQNLIL NMNDHGFVVC  
 AFNRTVSKVD DFLANEAKGT KVVGAQSLKE MVSKLKKPRR IILLVKAGQA  
 VDDFIEKLVP LLDTGDIID GGNSEYRDTT RRCRDLKAKG ILFVGSGVSG  
 GEEGARYGPS LMPGGNKEAW PHIKTIFQGI AAKVGTGEPG CDWVGDEGAG  
 HFVKMVHNGI EYGDMQLICE AYHLMKDV LG MAQDEMAQAF EDWNKTELDS  
 FLIEITANIL KFQDTDGKHL LPKIRDSAGQ KGTGKWTAIS ALEYGVPVTL  
 IGEAVFARCL SSLKDERIQA SKKLKGPQKF QFDGDKKSFL EDIRKALYAS  
 KIISYAQGM LRLQAATEFG WTLNYGGIAL MWRGGCIIRS VFLGKIKDAF  
 DRNPELQNL LDDFFKSAVE NCQDSWRRAV STGVQAGIPM PCFTTALSFY  
 DGYRHEMLPA SLIQAQRDYFGAHTYELLA PGQFIHTNWT GHGGTVSSSS YNA

Formulation The PGD solution (1mg/ml) contains 10% Glycerol, 1mM DTT, 0.1M NaCl, and 20mM Tris-HCl buffer (pH 8.0).

**Introduction**

6PGD is the 2nd dehydrogenase in the pentose phosphate shift. Pentose is crucial for the biosynthesis of nucleic acid. The pentose phosphate cycle is a prominent source of NADPH. 6PGD deficiency is mostly asymptomatic, and the inheritance of this disease is autosomal dominant. PGD deficiency elevates the erythrocyte pyruvate kinase levels of activity & decreases glutathione synthetase, which causes hemolysis.

**Biological Activity**

Specific activity is > 10unit/mg. One unit will oxidize 1.0 umole of 6-phospho-D-gluconate to D-ribulose 5- phosphate per minute at pH 8.0 at 25°C, in the presence of

**Caution: Product has not been fully validated for medical applications. For research use only.**

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Address: 10292 Central Ave. #205, Montclair, CA, USA

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beta-NADP.

### Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

### Background

PGD Human Recombinant produced in E.Coli is a single, non-glycosylated polypeptide chain containing 503 amino acids (1-483) and having a molecular mass of 55.3 kDa. PGD Human is fused to a 20 amino acid His-Tag at N-terminus and purified by proprietary chromatographic techniques.

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