

## 32-6881: PGD Human, Active

**Application :** Functional Assay

**Alternative Name :** EC 1.1.1.44, 6PGD, PGDH, 6-phosphogluconate dehydrogenase decarboxylating, PGD.

### Description

Source: Escherichia Coli.

Sterile Filtered colorless solution.

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 deasis is autosomal dominant. PGD deficiency elevate the erythrocyte pyruvate kinase levels of activity & decreases glutathione synthetase, which causes hemolysis.

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.

### Product Info

**Amount :** 2 µg / 10 µg

**Purification :** Greater than 90.0% as determined by SDS-PAGE.

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

**Storage condition :** 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.

**Amino Acid :** 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 KIISYAQGFLLRQAATEFG WTLNYGGIAL MWRGGCIIRS  
VFLGKIKDAF DRNPELQNLÅ LDDFFKSAVE NCQDSWRRVAV STGVQAGIPM PCFTTALSFY  
DGYRHEMLPA SLIQAQRDYFÅ GAHTYELLAK PGQFIHTNWT GHGGTVSSSS YNAA Å

### Application Note

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 25Å°C, in the presence of beta-NADP.