Recombinant Human Glucose-6-phosphate Dehydrogenase, His-tagged

Cat. No. G6PD-2397H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant humanG6PD protein, fused to His-tag at N-terminus, was expressed in Hi-5 cellusing baculovirus expression system and purified by using conventionalchromatography
Species	Human
Source	Insect Cells
ProteinLength	1-515 aa
Description	Glucose-6-phosphatedehydrogenase (G6PD) is the rate-limiting enzyme of the pento se phosphatepathway, a metabolic pathway that supplies reducing energy to cells by maintaining the level of NADPH. G6PD converts glucose-6-phosphate into6-phospho glucono-delta-lactone and simultaneously produce NADPH. The NADPH inturn maint ains the level of glutathione in these cells that helps protect thered blood cells against oxidative damage. G6PD deficiency cause acutehemolytic anemia
Form	Liquid. 20mMTris-HCl buffer (pH8.0) containing 20% glycerol 0.1mM PMSF, 2mM EDTA, 2mMDTT, 200mM NaCl
Molecular Weight	61.4kDa (535aa)
Purity	> 95% by SDS -PAGE

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

Concentration	0.5mg/ml (determinedby Bradford assay)
Sequences of aminoacids	MGSSHHHHHHSSGLVPRGSH MAEQVALSRT QVCGILREEL FQGDAFHQSD THIFIIMGAS GDLAKKKIYP TIWWLFRDGLLPENTFIVGY ARSRLTVADI RKQSEPFFKA TPEEKLKLED FFARNSYVAG QYDDAASYQR LNSHMNALHLGSQANRLFYL ALPPTVYEAV TKNIHESCMS QIGWNRIIVE KPFGRDLQSS DRLSNHISSL FREDQIYRIDHYLGKEMVQN LMVLRFANRI FGPIWNRDNI ACVILTFKEP FGTEGRGGYF DEFGIIRDVM QNHLLQMLCLVAMEKPASTN SDDVRDEKVK VLKCISEVQA NNVVLGQYVG NPDGEGEATK GYLDDPTVPR GSTTATFAAVVLYVENERWD GVPFILRCGK ALNERKAEVR LQFHDVAGDI FHQQCKRNEL VIRVQPNEAV YTKMMTKKPGMFFNPEESEL DLTYGNRYKN VKLPDAYERL ILDVFCGSQM HFVRSDELRE AWRIFTPLLH QIELEKPKPIPYIYGSRGPT EADELMKRVG FQYEGTYKWV NPHKL
Biological activity	Specific activity is > 7 units/mlobtained by measuring the increase of NADPH in absorbance at 340 nm resultingfrom the reduction of NAD or NADP. One unit oxidizes 1.0 umoleD-glucose-6-phosphate to 6-phospho-D-gluconate per min in the presence ofbeta-NADP at pH 7.4 at 25C
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.
Officialsymbol	G6PD

GENE INFORMATION

Gene Name	G6PD glucose-6-phosphatedehydrogenase [Homo sapiens]
Synonyms	glucose-6-phosphatedehydrogenase; G6PD1; EC 1.1.1.49; OTTHUMP00000196180;

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

	glucose-6-phosphate1-dehydrogenase; glucose-6-phosphate dehydrogenase, G6PD; OTTHUMP00000026034;OTTHUMP00000026039
Gene ID	2539
mRNA Refseq	NM_001042351
Protein Refseq	NP_001035810
MIM	305900
UniProt ID	P11413
Chromosome Location	Xq28
Pathway	Glutathionemetabolism; Glutathione metabolism; Glutathione metabolism; Metabolicpathways; Metabolism of carbohydrates; Pentose Phosphate Pathway
Function	NADPbinding; binding; glucose binding; glucose binding; glucose-6-phosphatedehydrogenase activity; oxidoreductase activity; protein homodimerizationactivity

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA