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G6PD, Human recombinant protein

Glucose-6-phosphate 1-dehydrogenase, Zwf.
Catalog # PBV11143r

Specification

G6PD, Human recombinant protein - Product info

Primary Accession	P11413
Concentration	0.5
Calculated MW	61.4 kDa (515 aa, 1-515 aa) KDa

G6PD, Human recombinant protein - Additional Info

Gene ID	2539
Gene Symbol	G6PD

Other Names
Glucose-6-phosphate 1-dehydrogenase, Zwf.

Gene Source	Human
Source	Hi-5 cells, Baculovirus system
Assay&Purity	SDS-PAGE; ≥95%
Assay2&Purity2	N/A;
Recombinant	Yes
Results	Specific activity is > 7 units/ml obtained by measuring the increase of NADPH in absorbance at 340 nm resulting from the reduction of NAD or NADP. One unit oxidizes 1.0 µmole D-glucose-6-phosphate to 6-phospho-Dgluconate per min in the presence of beta-NADP at pH 7.4 at 25ºC.
Sequence	MGSSHHHHHH SSGLVPRGSH MAEQVALSRT QVCGILREEL FQGDAFHQSD THIFIIMGAS GDLAKKKIYP TIWWLFRDGL LPENTFIVGY ARSRLTVADI RKQSEPFFKA TPEEKLKLED FFARNSYVAG QYDDAASYQR LNSHMNALHL GSQANRLFYL ALPPTVYEAV TKNIHESCMS QIGWNRIIVE KPFGRDLQSS DRLSNHISSL FREDQIYRID HYLGKEMVQN LMVLRFANRI FGPIWNRDNI ACVILTFKEP FGTEGRGGYF DEFGIIRDVM QNHLLQMLCL VAMEKPASTN SDDVRDEKVK VLKCISEVQA NNVVLGQYVG NPDGEGEATK GYLDDPTVPR GSTTATFAAV VLYVENERWD GVPFILRCGK ALNERKAEVR LQFHDVAGDI FHQQCKRNEL VIRVQPNEAV YTKMMTKKPG MFFNPEESEL DLTYGNRYKN VKLPDAYERL ILDVFCGSQM HFVRSDELRE AWRIFTPLLH QIELEKPKPI PYIYGSRGPT EADELMKRVG FQYEGTYKWV NPHKL

Target/Specificity
G6PD

Format
Liquid

Storage
-20°C; 0.5 mg/ml solution in 20 mM Tris-HCl buffer (pH 8.0) containing 20% glycerol, 0.1 mM PMSF, 2 mM EDTA, 2 mM DTT, 200 mM NaCl.

G6PD, Human recombinant protein - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

G6PD, Human recombinant protein - Images

G6PD, Human recombinant protein - Background

Glucose-6-phosphate dehydrogenase is the rate-limiting enzyme of the pentose phosphate pathway, a metabolic pathway that supplies reducing energy to cells by maintaining the level of NADPH. G6PD converts glucose-6-phosphate into 6-phosphoglucono-delta-lactone and simultaneously produce NADPH. The NADPH in turn maintains the level of glutathione in these cells that helps protect the red blood cells against oxidative damage. G6PD deficiency cause acute hemolytic anemia. Recombinant human G6PD protein, fused to His-tag at N-terminus, was expressed in Hi-5 cells using baculovirus expression system and purified by using conventional chromatography.

G6PD, Human recombinant protein - References

Persico M.G.,et al.Nucleic Acids Res. 14:2511-2522(1986).
Martini G.,et al.EMBO J. 5:1849-1855(1986).
Hirono A.,et al.Proc. Natl. Acad. Sci. U.S.A. 85:3951-3954(1988).
Chen E.Y.,et al.Genomics 10:792-800(1991).
Chen E.Y.,et al.Hum. Mol. Genet. 5:659-668(1996).