For research use only

G6PD, Human Recombinant

CATALOG #: 7532-100 100 µg

ALTERNATE NAMES: Glucose-6-phosphate 1-dehydrogenase, Zwf.

SOURCE: Hi-5 cells, Baculovirus system

PURITY: > 95% by SDS - PAGE

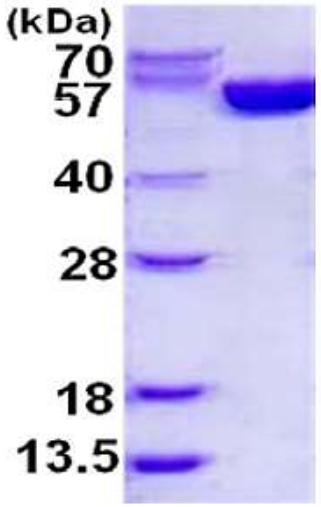
MOL. WEIGHT: 61.4 kDa (515 aa, 1-515 aa)

FORMULATION: 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.

STORAGE CONDITIONS:
Can be stored at 4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C. Avoid repeated freezing and thawing cycles.

DESCRIPTION:
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.

AMINO ACID 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



Human Recombinant G6PD

BIOLOGICAL ACTIVITY:
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.

RELATED PRODUCTS:
- E.Coli Recombinant G6PD **(Cat. No. 6367-100)**
- Glucose-6-Phosphate Dehydrogenase Activity Assay Kit **(Cat. No. K757-100)**
- DHEA **(Cat. No. 2172-100, -500)**
- Human recombinant UGDH **(Cat. No. 6368-50)**

FOR RESEARCH USE ONLY! Not to be used in humans.