

Active Recombinant E.coli G6PD Protein (1-491aa)

Cat. No. G6PD-01E **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant E. coli G6PD protein (1-491aa) was expressed in E. coli and purified by conventional chromatography techniques.
Species	E.coli
Source	E.coli
ProteinLength	1-491aa
Description	Glucose-6-phosphate dehydrogenase (G6PD) 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.
Form	Liquid
Bio-activity	Specific activity is > 50 unit/mg obtained by measuring the increase of beta-NADPH in absorbance at 340 nm resulting from the reduction of beta-NADP. One unit oxidizes 1.0 umole D-glucose-6-phosphate to 6-phospho-D-gluconate per min in the presence of beta-NADP at pH 7.4 at 25 centigrade.
Molecular Mass	55.7 kDa (491aa) confirmed by MALDI-TOF

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AA Sequence	MAVTQTAQACDLVIFGAKGDLARRKLLPSLYQLEKAGQLNPDTRIIGVGRADWDKAA YTKVVREALETFMKETIDEGLDWDTLSARLDFCNLDVNDTAAFSRLGAMLDQKNRITIN YFAMPPSTFGAICKGLGEAKLNAKPARVVMKPLGTSLATSQEINDQVGEYFEECQV YRIDHYLGKETVLNLLALRFANSLFVNNWDNRTIDHVEITVAEEVGIEGRWGYFDKA GQMRDMIQNHLLQILCMIAMSPPSDLSADSIRDEKVKVLKSLRRIDRSNVREKTVRG QYTAGFAQGKKVPGYLEEEGANKSSNTETFVAIRVDIDNWRWAGVPFYLRTGKRLP TKCSEVVVYFKTPELNLFKESWQDLPQNKLTIRLQPDEGVDIQVLNKVPGLDHKHNL QITKLDLSYSETFNQTHLADAYERLLLETMRGIQALFVRRDEVEEAWKWVDSITEAW AMDNDAPKPYQAGTWGPVASVAMITRDGRSWNEFE
Purity	> 95% by SDS-PAGE
Applications	SDS-PAGE, Enzyme Activity
Notes	For research use only. This product is not intended or approved for human, diagnostics or veterinary use.
Storage	Can be stored at +2 to +8 centigrade for 1 week. For long term storage, aliquot and store at -20 to -80 centigrade. Avoid repeated freezing and thawing cycles.
Concentration	1 mg/mL (determined by Bradford assay)
Storage Buffer	Phosphate-Buffered Saline (pH 7.4) containing 10% glycerol, 0.1mM PMSF, 2mM EDTA, 0.5mM DTT
GENE INFORMATION	
Gene Name	zwf NADP(+)-dependent glucose-6-phosphate dehydrogenase [<i>Escherichia coli</i> str. K-12 substr. MG1655]
Official Symbol	zwf

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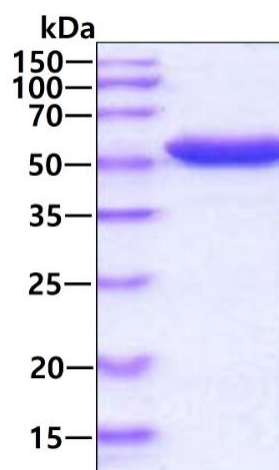
Synonyms zwf; NADP(+)-dependent glucose-6-phosphate dehydrogenase; ECK1853; EC 1.1.1.49; Glucose-6-phosphate 1-dehydrogenase; Glucose-6-phosphate 1-dehydrogenase G6PD; G6PD1; G6pdx; Glucose 6 phosphate 1 dehydrogenase; MET19; POS10; Zwf1p.

Gene ID [946370](#)

Protein Refseq [NP_416366](#)

UniProt ID [P0AC53](#)

SDS-PAGE



3 µg by SDS-PAGE under reducing condition and visualized by coomassie blue stain.