

**AR50248PU-N****gor (1-450, His-tag) - Purified****Alternate names:**

ECK3485, Glutathione oxidoreductase, JW3467, gorA

**Quantity:**

0.5 mg

**Concentration:**

1.0 mg/ml (determined by Bradford assay)

**Background:**

gor, also known as Glutathione reductase, belongs to the class-I pyridine nucleotide disulfide oxidoreductase family. The main function of the protein is to maintain high levels of reduced glutathione in the cytosol. With the concomitant oxidation of NADPH, Glutathione reductase transforms oxidized glutathione to the reduced form. The active site of the protein is a redox-active disulfide bond.

**Uniprot ID:**[P06715](#)**NCBI:**[NP\\_417957.1](#)**GeneID:**[948014](#)**Source:**

E. coli

**Format:****State:** Liquid purified protein**Purity:** >90% by SDS - PAGE**Buffer System:** 20 mM Tris-HCl buffer (pH8.0) containing 10% glycerol, 0.1M NaCl, 1mM DTT**Description:**

Recombinant E. coli gor protein, fused to His-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography techniques.

**AA Sequence:**

MGSSHHHHHH SSGLVPRGSH MGSMTKHYDY IAIGGGSGGI ASINRAAMYG QKCALIEAKE  
LGGETCVNVGC VPKKVMWHA QIREAIHMYG PDYGFDTTIN KFNWETLIAS RTAYIDRIHT  
SYENVLGKNN VDIKGFARF VDAKTLEVNG ETITADHILI ATGGRPSHPD IPGVEYGIDS  
DGFFALPALP ERVAVVGAGY IAVELAGVIN GLGAKTHLFV RKHAPLRSFD PMISETLVEV  
MNAEGPQLHT NAIPKAVVKN TDGSLTLELE DGRSETVDCL IWAIGREPAN DNINLEAAGV  
KTNEKGYIVV DKYQNTNIEG IYAVGDNTGA VELTPVAVA GRRLSERLFN NKPDEHLDYS  
NIPTVVFVSH PIGTVGLTEP QAREQYGDDQ VKVYKSSFTA MYTAVTTHRQ PCRMKLVCVG  
SEEKIVGIHG IGFMDLEMLQ GFAVALKMGA TKKDFDNTVA IHPTAAEEFV TMR

**Specific Activity:** > 52 unit/ml.

One unit will reduce 1.0 umol of oxidized glutathione per minute at pH 7.5 at 25°C.

**Molecular weight:** 51.2 kDa (473aa) confirmed by MALDI-TOF**Storage:**

Store undiluted at 2-8°C for one week or (in aliquots) at -20°C to -80°C for longer.

Avoid repeated freezing and thawing.

Shelf life: one year from despatch.

**General Readings:**

Staal G.E. et al. (1969) Biochim. Biophys. Acta 185: 63-69. Stoll V.S.. et al. (1997) Biochemistry 36: 6437-6447.

**Protocols:**

1. Prepare a 1,450 ul assay buffer. The final concentrations are 75mM Potassium phosphate (pH 7.5), 2.6mM EDTA, 1mM glutathione, 0.09mM beta-NADPH, and 0.13% BSA.
2. Add 50 ul of recombinant gor protein with 0.037 ug, 0.075 ug and 0.15 ug in assay buffer

3. Mix and load 200 ul of reaction mix in to a plate well.
4. Record the decrease in A340nm for 5 minutes at 25°C.

**Pictures:**

15 % SDS - PAGE (3ug)

