

Product datasheet for AR50143PU-N

OriGene Technologies, Inc.

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Glutathione reductase (43-522, His-tag) Human Protein

Product data:

Product Type: Recombinant Proteins

Description: Glutathione reductase (43-522, His-tag) human recombinant protein, 0.25 mg

Species: Human **Expression Host:** E. coli

Expression cDNA Clone

MGSSHHHHHH SSGLVPRGSH MGSMAMACRQ EPQPQGPPPA AGAVASYDYL VIGGGSGGLA or AA Sequence: SARRAAELGA RAAVVESHKL GGTCVNVGCV PKKVMWNTAV HSEFMHDHAD YGFPSCEGKF

> NWRVIKEKRD AYVSRLNAIY QNNLTKSHIE IIRGHAAFTS DPKPTIEVSG KKYTAPHILI ATGGMPSTPH ESQIPGASLG ITSDGFFQLE ELPGRSVIVG AGYIAVEMAG ILSALGSKTS LMIRHDKVLR SFDSMISTNC

TEELENAGVE VLKFSQVKEV KKTLSGLEVS MVTAVPGRLP VMTMIPDVDC LLWAIGRVPN TKDLSLNKLG IQTDDKGHII VDEFQNTNVK GIYAVGDVCG KALLTPVAIA AGRKLAHRLF EYKEDSKLDY NNIPTVVFSH PPIGTVGLTE DEAIHKYGIE NVKTYSTSFT PMYHAVTKRK

TKCVMKMVCA NKEEKVVGIH MQGLGCDEML QGFAVAVKMG ATKADFDNTV AIHPTSSEEL VTLR

Tag: His-tag Predicted MW: 54.3 kDa Concentration: lot specific

Purity: >95% by SDS - PAGE

Buffer: Presentation State: Purified

State: Liquid purified protein

Buffer System: 20 mM Tris-HCl buffer (pH 8.0) containing 1 mM DTT, 10% glycerol, 0.1M NaCl

Specific: > 29 units/ml. One unit will reduce 1.0 umol of oxidized glutathione per minute at **Bioactivity:**

pH 7.5 at 25°C.

Activity Assay:

1. Prepare a 1,450 ul assay buffer. The final concentrations are 75 mM Potassium phosphate

(pH 7.5), 2.6mM EDTA 1mM glutathione, 0.09mM beta-NADPH, 0.13% BSA.

2. Add 50 ul of recombinant GSR protein with 0.018 ug, 0.037 ug and 0.075 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.

Preparation: Liquid purified protein





Glutathione reductase (43-522, His-tag) Human Protein - AR50143PU-N

Protein Description: Recombinant human GSR protein, fused to His-tag at N-terminus, was expressed in E.coli and

purified by using conventional chromatography techniques.

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.

Stability: Shelf life: one year from despatch.

RefSeq: NP 000628

Locus ID: 2936

UniProt ID: <u>P00390</u>, <u>V9HW90</u>

Cytogenetics: 8p12

Synonyms: GR; GSRD; HEL-75; HEL-S-122m

Summary: This gene encodes a member of the class-I pyridine nucleotide-disulfide oxidoreductase

family. This enzyme is a homodimeric flavoprotein. It is a central enzyme of cellular

antioxidant defense, and reduces oxidized glutathione disulfide (GSSG) to the sulfhydryl form

GSH, which is an important cellular antioxidant. Rare mutations in this gene result in

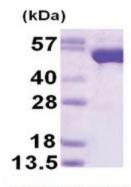
hereditary glutathione reductase deficiency. Multiple alternatively spliced transcript variants

encoding different isoforms have been found. [provided by RefSeq, Aug 2010]

Protein Families: Druggable Genome

Protein Pathways: Glutathione metabolism

Product images:



15% SDS-PAGE (3ug)