

## Product datasheet for **AR50143PU-N**

### 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 or AA Sequence:	<u>MGSSHHHHHH SSGLVPRGSH MGSMAMACRQ EPQPQGPPPA AGAVASYDYL VIGGGSGGLA SARRAAELGA RAAVVESHKL GGTCVNVGCV PKKVMWNTAV HSEFMHDHAD YGFPSCEGKF NWRVIKEKRD AYSRLNAIY QNNLTKSHIE IIRGHAAFTS DPKPTIEVSG KKYTAPHILI ATGGMPSTPH ESQIPGASLG ITSDGFFQLE ELPGRSVIVG AGYIAVEMAG ILSALGSKTS LMIRHDKVLR SFDSMISTNC TELENAGVE VLKFSQVKEV KKTLSGLEVS MVTAVPGRLP VMTMIPDVDC LLWAIGRVPN TKDLSLNKLG IQTDDKGHII VDEFQNTNVK GIYAVGDVCG KALLTPVAIA AGRKLAHRLF EYKEDSKLDY NNIPTVVFH PPIGTVGLTE DEAIHKYIE NVKTYSTSFT PMYHAVTKRK TKCVMKMVCA NKEEKVWGIH MQGLGCDEML QGFAVAVKMG ATKADFDNTV AIHPTSSEEL VTLR</u>
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
Bioactivity:	Specific: > 29 units/ml. One unit will reduce 1.0 umol of oxidized glutathione per minute at pH 7.5 at 25°C. <b>Activity Assay:</b> 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



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<b>Protein Description:</b>	Recombinant human GSR protein, fused to His-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography techniques.
<b>Storage:</b>	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.
<b>Stability:</b>	Shelf life: one year from despatch.
<b>RefSeq:</b>	<a href="#">NP_000628</a>
<b>Locus ID:</b>	2936
<b>UniProt ID:</b>	<a href="#">P00390</a> , <a href="#">V9HW90</a>
<b>Cytogenetics:</b>	8p12
<b>Synonyms:</b>	GR; GSRD; HEL-75; HEL-S-122m
<b>Summary:</b>	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]
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Glutathione metabolism

**Product images:**