

## 32-2399: GSR Recombinant Protein

**Alternative Name :** Glutathione reductase mitochondrial,GR,GRase,GSR,GLUR,GRD1.

### Description

Source : Escherichia Coli. GSR Human Recombinant produced in E.coli is a single, non-glycosylated polypeptide chain containing 504 amino acids (43-522) and having a molecular mass of 54.3kDa. GSR is fused to a 24 amino acid His-tag at N-terminus & purified by proprietary chromatographic techniques. Glutathione reductase (GSR) belongs to the class-I pyridine nucleotide-disulfide oxidoreductase family. The GSR enzyme is a homodimeric flavoprotein and has a role in maintaining glutathione (GSH) in its reduced form by catalyzing the reduction of glutathione disulfide (GSSG):  $GSSG + NADPH + H^+ \rightarrow 2GSH + NADP^+$ . In the majority of eukaryotic cells, GSR upholds the ratio of  $[GSH] / [GSSG]$ , and partakes in quite a few critical functions such as the detoxification of reactive oxygen species as well as protein and DNA biosynthesis.

### Product Info

<b>Amount :</b>	10 $\mu$ g
<b>Purification :</b>	Greater than 95.0% as determined by SDS-PAGE.
<b>Content :</b>	The GSR solution (1mg/ml) contains 20mM Tris-HCl buffer (pH 8.0), 1mM DTT, 10% glycerol and 0.1M NaCl.
<b>Storage condition :</b>	Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.
<b>Amino Acid :</b>	MGSSHHHHHH SSGLVPRGSH MGSMAMACRQ EPQPQGPPPA AGAVASYDYI VIGGGSGGLA SARRAAELGA RAAVVESHKL GGTCVNVGCV PKKVMWNTAV HSEFMHDHAD YGFPSCEGKF NWRVIKEKRD AYVSRLNAIY 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 NNIPTVVFSH PPIGTVGLTE DEAIHKYGIE NVKTYSTSFT PMYHAVTKRK TKCVMKMVCA NKEEKVVGIIH MQGLGCDEML QGFAVAVKMG ATKADFDNTV AIHPTSSEEL VTLR.

### Application Note

Specific activity: > 29 unit/ml. One unit will reduce 1.0  $\mu$ mol of oxidized glutathione per minute at pH 7.5 at 25°C.

