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# **GSR Human**

Description: 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 & Durified by proprietary chromatographic techniques.

Catalog #:ENPS-209

For research use only.

Synonyms: Glutathione reductase mitochondrial, GR, GRase, GSR, GLUR, GRD1.

Source: Escherichia Coli.

Physical Appearance: Sterile Filtered colorless solution.

Amino Acid Sequence: MGSSHHHHHH SSGLVPRGSH MGSMAMACRQ EPQPQGPPPA AGAVASYDYL VIGGGSGGLA SARRAAELGA RAAVVESHKL GGTCVNVGCV PKKVMWNTAV HSEFMHDHAD YGFPSCEGKF NWRVIKEKRD AYVSRLNAIY QNNLTKSHIE IIRGHAAFTS DPKPTIEVSG KKYTAPHILI ATGGMPSTPH ESQIPGASLG ITSDGFFQLE ELPGRSVIVG AGYIAVEMAG IL

Purity: Greater than 95.0% as determined by SDS-PAGE.

#### Formulation:

The GSR solution (1mg/ml) contains 20mM Tris-HCl buffer (pH 8.0), 1mM DTT, 10% glycerol and 0.1M NaCl.

# Stability:

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.

## Usage:

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

### Introduction:

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+ ->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.

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