
Product Data Sheet

Product Name: GSR Human
 Cat. No.: GP21732
 Batch No.: 1

Product Data

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	Glutathione reductase mitochondrial; GR; GRase; GSR; GLUR; GRD1.		
Amino Acid Sequence	MGSSHHHHHH SGLVPRGSH MGSMAMACRQ EPQPQGPPPA AGAVASYDYL VIGGGSGGLA SARAAELGA 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 NNIPTVVFSS PPIGTVGLTE DEAIHKYGIE NVKTYSTSFT PMYHAVTKRK TKCVMKMOVCA NKEEKVVGIIH MQGLGCDEML QGFAVAVKMG ATKADFDNTV AIHPTSSEEL VTLR.		
Formulation	The GSR solution (1mg/ml) contains 20mM Tris-HCl buffer (pH 8.0), 1mM DTT, 10% glycerol and 0.1M NaCl.		

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): $GSSG + NADPH + H^+ \rightarrow 2GSH + NADP^+$. 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.

Biological Activity

Specific activity: > 29 unit/ml. One unit will reduce 1.0 umol of oxidized glutathione per

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

minute at pH 7.5 at 25°C .

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.

Background

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.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA