Active Recombinant Human GSR Protein, His tagged

Cat. No. GSR-1318H **Lot. No.** (See product label)

SPECIFICATION

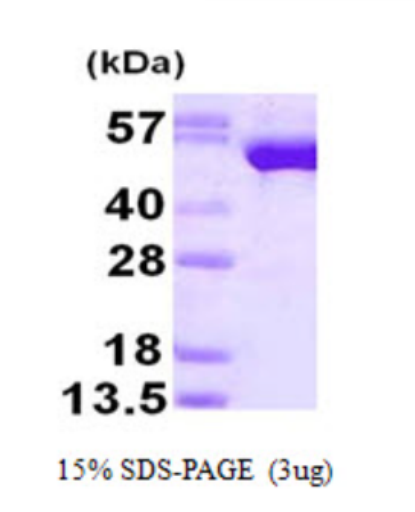
Product Overview	Recombinant human GSR protein, fused to His-tag at N-terminus, was expressed in E. coli and purified by using conventional chromatography techniques.
Species	Human
Source	E.coli
ProteinLength	43-522 aa
Description	This gene encodes a member of the class-I pyridine nucleotide-disulfide 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.
Form	Liquid
Molecular Mass	54.3 kDa
Bio-activity	Specific activity is > 45 unit/mg.
AASequence	MGSSHHHHHHSSGLVPRGSHMGSMAMACRQEPQPQGPPPAAGAVASYDYLVIGG GSGGLASARRAAELGARAAVVESHKLGGTCVNVGCVPKKVMWNTAVHSEFMHDH ADYGFPSCEGKFNWRVIKEKRDAYVSRLNAIYQNNLTKSHIEIIRGHAAFTSDPKPTIE

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	VSGKKYTAPHILIATGGMPSTPHESQIPGASLGITSDGFFQLEELPGRSVIVGAGYIAV EMAGILSALGSKTSLMIRHDKVLRSFDSMISTNCTEELENAGVEVLKFSQVKEVKKTL SGLEVSMVTAVPGRLPVMTMIPDVDCLLWAIGRVPNTKDLSLNKLGIQTDDKGHIIVD EFQNTNVKGIYAVGDVCGKALLTPVAIAAGRKLAHRLFEYKEDSKLDYNNIPTVVFSH PPIGTVGLTEDEAIHKYGIENVKTYSTSFTPMYHAVTKRKTKCVMKMVCANKEEKVV GIHMQGLGCDEMLQGFAVAVKMGATKADFDNTVAIHPTSSEELVTLR
Application	Enzyme Activity, SDS-PAGE
Unit Definition	The unit definition for glutathione reductase activity may be expressed in terms of the oxidation of NADPH or the reduction of GSSG since their molar ratio is 1:1. One unit of glutathione reductase oxidizes 1 μmol of NADPH per minute at 37 centigrade, pH 7.5.
Purity	> 95% by SDS-PAGE
Note	For research use only. This product is not intended or approved for human, diagnostics or veterinary use.
Storage	Can be stored at +2 to +8 centigrade for 1 week. For long term storage, aliquot and store at -20 to -80 centigrade. Avoid repeated freezing and thawing cycles.
Storage Buffer	20mM Tris-HCl buffer (pH 8.0) containing 1mM DTT, 10% glycerol, 0.1M NaCl
Concentration	1 mg/mL (determined by Bradford assay)
Reference	1. Stoll V S., et al. (1997) Biochemistry. 36:6437-6447. 2. Karplus P A., et al. (1987) J Mol biol. 195:701-729.

GENE INFORMATION

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Gene Name	GSR glutathione-disulfide reductase [Homo sapiens (human)]
Official Symbol	GSR
Synonyms	GSR; glutathione reductase; glutathione reductase, mitochondrial; GR; GRase; MGC78522;
Gene ID	2936
mRNA Refseq	NM_000637
Protein Refseq	NP_000628
MIM	138300
UniProt ID	P00390
SDS-PAGE	 3 μg by SDS-PAGE under reducing condition and visualized by coomassie blue

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