

Glutathione Reductase (Hu) Recombinant Protein

Lot Number: QI2088262

Product Data Sheet

Tested Species Reactivity

Not Applicable (N/A)

Tested Applications

Control (Ctrl)

Dilution *

Assay Dependent

* Suggested working dilutions are given as a guide only. It is recommended that the user titrates the product for use in their own experiment using appropriate negative and positive controls.

Details

Catalog Number:	LF-P0024
Size:	0.5 mg
Class:	Recombinant
Type:	Protein
Clone:	
Host / Isotype:	E. Coli /
Immunogen:	

Form Information

Form:	Lyophilized
Purification:	purified
Storage Buffer:	0.02M HEPES, pH 7.5
Preservative:	no preservative
Storage Conditions:	-20°C

Product Specific Information

This protein corresponds to human Glutathione Reductase (44-522 aa with additional 3 amino acids-GSH at N-term), which has a molecular weight of 51.7 kDa.

Specific activity: 19.4 U/mg, where one unit will reduce 1 umol of oxidized glutathione per min at pH 7.5 at 25°C.

Purity: >95% by SDS-PAGE.

After reconstitution, store at -80°C and avoid freeze and thaw cycles.

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General Information

Glutathione reductase (GR) is a member of pyridine nucleotide-disulfide oxidoreductases, which includes the closely related enzymes thioredoxin reductase, lipoamide dehydrogenase, trypanothione reductase and mercuric ion reductase. GR is a cytoplasmic flavoenzyme widely distributed in aerobic organisms. The dimeric protein is composed of two identical subunits, each containing 1 FAD and 1 redox-active disulfide/dithiol as components of the catalytic apparatus. It plays 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 most eukaryotic cells, GR maintains the ratio of [GSH]/[GSSG] elevated, and participates in several vital functions such as the detoxification of reactive oxygen species as well as protein and DNA biosynthesis.

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