

Glutaredoxin 1/GRX1 Protein, Human, Recombinant (His)

General Information

Synonyms:	GLRX;GRX;GRX1;glutaredoxin
Protein Construction:	A DNA sequence encoding the human GLRX (P35754)(Met1-Gln106) was expressed with a polyhistidine tag at the N-terminus. Predicted N terminal: His
Species:	Human
Expression Host:	E. coli
Accession:	P35754
Molecular Weight:	13.6 kDa (predicted); 12 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 85 % as determined by SDS-PAGE
Endotoxin:	Please contact us for more information.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing 50 mM Tris, 10% Glycerol, 1 mM DTT, pH 8.0. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Glutaredoxin-1, also known as GRX1 and GLRX, belongs to the glutaredoxin family. Glutaredoxins are small redox enzymes that use glutathione as a cofactor. Glutaredoxins are oxidized by substrates, and reduced non-enzymatically by glutathione. Glutaredoxin-1 functions as an electron carrier in the glutathione-dependent synthesis of deoxyribonucleotides by the enzyme ribonucleotide reductase. Glutaredoxin-1 exists in either a reduced or an oxidized form. Glutaredoxins function as electron carriers in the glutathione-dependent synthesis

of deoxyribonucleotides by the enzyme ribonucleotide reductase.

Reference

Holmgren A. et al., 1988, FEMS Microbiol Rev. 4 (4): 271-97.

Holmgren A. 1988, Biochem Soc Trans. 16 (2): 95-6.

Holmgren A. 1989, J Biol Chem. 264 (24): 13963-6.

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