Catalog No. LF-P0003

ACTIVE PROTEIN

Glutaredoxin 1 (Human)

Background : Glutaredoxin (Grx), also known as thiol transferase, is a small heat-stable oxidoreductase. Grxs form part of the glutaredoxin system, comprising NADPH, GSH and glutathione reductase, which transfers electrons from NADPH to glutaredoxins via GSH (1). First discovered in E.coli as GSH-dependent hydrogen donors for ribonucleotide reductase, Grx catalyzes GSH-disulfide oxidoreductase via two redox-active cysteine residues (2). The active sequence (Cys-Pro-Tyr-Cys) is conserved in a variety of species. The 12-kD dithiol protein has a role in reduction of mixed disulfides in cells exposed to oxidative stress (3).

Source : Purified from *E.coli* expressing the human Glutaredoxin 1 gene

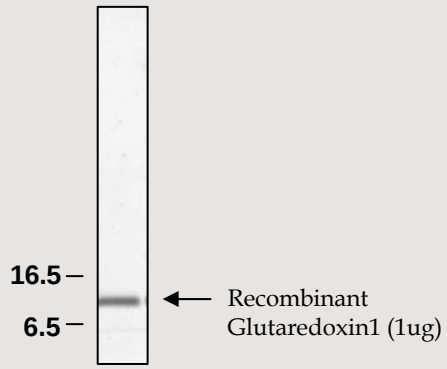
Molecular Weight : 11.8 kDa

Packaging size : 50 U

Specific activity : 145 U/mg
(Unit definition : One unit will cause the oxidation of 1µmole of NADPH per min)

Concentration : 1.0 mg/ml

Storage : Glutaredoxin 1 is supplied with a vial of storage buffer (20mM HEPES, pH 7.0 /10% glycerol). Store at -80°C.



Background Reference:

1) Holmgren, A. (1990) p. 146-154, CRC Press Inc., Boca Raton, FL
2) Holmgren, A. (1989) J. Biol. Chem. 264, 13963-13966.
3) Jung, C. H. and Thomas, J. A. (1996) Arch. Biochem. Biophys. 335, 61-72.
4) Alexios, V. et al. (1997) J. Biol. Chem. 272, 11236-11243

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