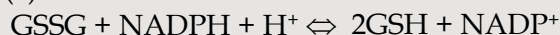


Glutathione Reductase (Yeast)

Background : 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) (1):



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 (2).

Source : Purified from *E.coli* expressing the yeast Glutathione reductase gene

Molecular Weight : 53 kDa

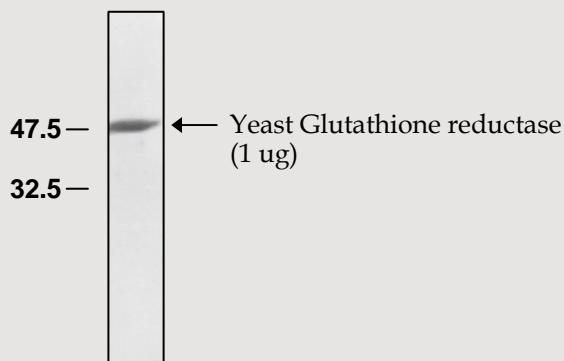
Packaging size : 100 U

Specific activity : 85 U/mg

(Unit definition : One unit will reduce 1 μ mole of oxidized glutathione per min at pH 7.5 at 25 °C)

Concentration : 1.0 mg/ml

Storage : Glutathione reductase is supplied with a vial of storage buffer (20mM HEPES, pH8.0 / 10% glycerol). Store at -80°C.



Background Reference:

- 1) Carlberg, I. and Mannervik, B. (1985) J. Biol. Chem. 261: 1629-1635.
- 2) Picaud, T. and Desbois, A. (2002) J. Biol. Chem. 277: 31715-31721.

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