

## Product Information

### GLUTATHIONE TRANSFERASE P1-1 Human, Recombinant

Product Code **G 1902**  
Storage Temperature  $-20\text{ }^{\circ}\text{C}$

E.C. 2.5.1.18

#### Product Description

A human, recombinant protein produced from overexpressing plasmid in *E. coli* and purified by affinity chromatography. The physical and catalytic properties of this enzyme are indistinguishable from those of the enzyme purified from human tissue.

Glutathione transferase (GST) catalyzes the formation of thioether conjugates between glutathione and xenobiotic compounds. The major biological function is believed to be a role in the elimination of reactive, electrophilic chemical species, many of which are generated by cellular oxidative reactions catalyzed by cytochrome P450 and other oxidases. GST P1-1 is widely distributed throughout the body (except for its notable absence from the liver) and is abundant in most tumor cells.

The recombinant protein is a homodimer with an apparent molecular weight of 50 kDa, based on the observed molecular weight of 25 kDa for the monomer under reducing conditions in SDS-PAGE.

Vial content: 100  $\mu\text{g}$  protein (Bradford). A 1-5 mg/ml solution containing 50 mM Tris-HCl, pH 7.5, 50 mM NaCl, 1 mM DTT, 1 mM EDTA, 50% (v/v) glycerol.

Purity: >95% by SDS-PAGE

Specific activity: Minimum 75 units/mg

Unit Definition: One unit will catalyze the conjugation of 1.0 micromole of 1-chloro-2,4-dinitrobenzene and reduced glutathione per minute at pH 6.5 at  $25\text{ }^{\circ}\text{C}$ .

#### Storage/Stability

The GST P1-1 product is stored at  $-20\text{ }^{\circ}\text{C}$ . The product as supplied is stable for at least 18 months.

#### References

1. Mannervik, B., and Widersten, M., in *Advances in Drug Metabolism in Man*, Pacifici, G.M., and Fracchi, G.N., eds., European Commission, Luxembourg pp. 407-459 (1995).
2. Widersten, M. et al., *Biochem. J.*, **276**, 519-524 (1991).
3. Stenberg, G. et al., *Protein Purif.*, **3**, 80-84 (1992).
4. Kolm, R.H. et al., *Protein Express. Purif.*, **6**, 265-271 (1995).

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