

## GSTP1, 1-210 aa, Human, His-tagged, Recombinant, *E.coli*

Cat. No. IBATGP0341

**Full name:** Glutathione S-transferase P

**NCBI Accession No.:** NP\_000843

**Synonyms:** DFN7, FAES3, GST3, PI

**Description:** GSTP1 is a glutathione S-transferase that belongs to the pi class. This enzyme acts by catalyzing the reaction of glutathione with an acceptor molecule to form an S-substituted glutathione (S=sulfur). The reactions utilizing glutathione contribute the transformation of a wide variety of electrophiles, including reactive products of lipid, protein, carcinogens, therapeutic drugs, environmental toxins, and products of oxidative stress. Recombinant GSTP1 protein was expressed in *E.coli* and purified by using conventional chromatography techniques.

**Form:** Liquid. In 20mM Tris-HCl buffer (pH7.0) containing 30% glycerol, 1mM EDTA, 0.1mM PMSF

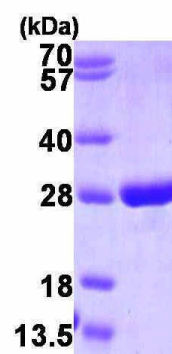
**Molecular Weight:** 27.6 kDa (247 aa), confirmed by MALDI-TOF

**Purity:** > 95 % by SDS - PAGE

**Concentration:** 0.5 mg/ml (determined by Bradford assay)

**Endotoxin Level:** < 1.0 EU per 1 µg of protein (determined by LAL method )

**Biological activity:** Specific activity is < 6.5 units/mg, and is defined as the amount of enzyme that conjugate 1.0 u mole of 1-chloro-2,4-dinitrobenzene (CDNB) with reduced glutathione per minute at pH 6.5 at 25C.



15% SDS-PAGE (3µg)

### Activity Assay

1. Prepare a 1.mll reaction mix into a suitable container: The final concentrations are 97 mM potassium phosphate, 0.97 mM EDTA, 2.5 mM glutathione, reduced, 1.0 mM 1-chloro-2,4-dinitrobenzene (CDNB), 3.2% (v/v) ethanol.
2. Equilibrate to 25C and monitor the A340nm until the value is constant using a spectrophotometer.
3. Add 50ul of recombinant GSTP1 protein with various concentrations (1ug, 2ug, 5ug) in 950ul reaction buffer.
4. Mix by inversion and record the increase in A340nm for 5 minutes.

### Sequences of amino acids:

MRGSHHHHHH GMASMTGGQQ MGRDLYDDDD KDRWGSHPMP YTVVYFPVVRG RCAALRMLLA DQGQSWKEEV VTVETWQEGS LKASCLYGQL PKFQDGDLTLL  
YQNTILRHL GRTLGLYGKD QQEAALVDMV NDGVEDLRCK YISLIYTNYE AGKDDYVKAL PGQLKPFETL LSQNQGGKTF IVGDQISFAD YNLDDLLLIH  
EVLAPGCLDA FPLLSAYVGR LSARPKLKAF LASPEYVNL P INGNKQ

### General references:

Lee KA, *et al.* (2001) *Blood*. 98(12):3483-5.

Hayes JD, *et al.* (1995) *Crit Rev Biochem Mol Biol*. 30(6):445-600.

**Storage:** Can be stored at +4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles

For research use only. This product is not intended or approved for human, diagnostics or veterinary use.



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