ALPHA DIAGNOSTIC INTERNATIONAL

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Product Specification Sheet

Glutahione Transferase-Pi (GST-pi) Antibodies

Cat. GSTP35-R-25	Recombinant purified Human GST-pi protein	Size: ☐ 25 ug
Cat. GSTP35-R-100	Recombinant purified Human GST-pi protein	Size: ☐ 100 ug

GST's are responsible for the metabolism of a broad range of xenobiotics and carcinogens. The enzyme catalyzes the reaction of glutathione with a wide variety of organic compounds to form thioethers, a reaction that is sometimes a first step in a detoxification process leading to mercapturic acid formation. GSTs play an important role defense against electrophilic chemicals generated by cellular oxidative reactions catalyzed by cytochrome P450 and other oxidases. GSTs are believed to defend against the highly reactive electrophiles that are formed as a result of cellular oxidative processes. Based on amino acid sequence similarities and antibody cross-reactivities, the mammalian cytosolic GSTs are divided into the following classes: alpha, mu, kappa, theta, pi, zeta, omega and sigma. GSTs exists as homodimers of ~25 kDa. GST A1-1 is mainly found in kidney, intestine, lung, and liver. GST M1-1 is restricted to liver and few other tissues. GST P1-1 has a widespread distribution in most tumor cells and tissues but it is absent in liver. The GST M1-1 is the type b allelic variant and corresponds to human GST Y.

GST Pi/ GST P1/ GST3, a 210aa protein (chrm 11q13) is present in all tissues and cells, with the exception of red cells, in which only erythrocyte GST (GSTe) is observed. Its expression was increased in many tumors relative to matched normal tissue and abundantly expressed in human skin. The protein shares 86% sequence identity with GSTP. GST Pi show enzyme activity towards CDNB; acrolein; adenine propenal; BDPE; benzyl isothiocyante; EA; 4-vinylpyridine.

Source of Antigen

Human GST-pi/GST P1-1 was expressed in E. coli and purified (>95%). Under native conditions, GST-alpha is homodimeric protein of ~50 kda and under reducing conditions ~25 kda. . It is supplied in 25 ug or 100 ug/vial in a buffer containing 50 mM Tris, pH 7.5, 50 mM NaCl; 1 mM DTT, 1 mM EDTA, 50% glycerol. Concentration is specified on the vial.

Specific activity: Approx. 50 units/mg. One unit will catalyze the conjugation of 1.0 micromole of 1-chloro-2-4-dinitrobenzene and reduced glutathione per min at pH 6.5 at 25oC.

Storage

Store at –20oC.

Stability: 6-12 months at –20oC or below.
Shipping: 4oC for solutions and room temp for powder.

Recommended Usage

Purified GST-mu protein can be used for biological activity determination, ELISA, and for standards or for positive control for Western. **Protein concentration must be optimized for each application under defined experimental conditions.**

General references: Ali-Osman, F (1997). J. Biol. Chem. 272: 10004-10012; Board, P.; (1993) J. Biol. Chem. 268: 15655-15658; Henderson, C. J (200) Proc. Nat. Acad. Sci. 97: 12741-12745; Konohana, A (1990) J. Invest. Derm. 95: 119-126;

This product is for in vitro research use only.

Related material available from ADI

Purified GST, Monoclonal anti-GST, GST Coated ELISA plates
Anti-Rabbit HRP conjugates Single solution, ready to use, TMB substrates for Blotting

Western blots Recycling Kit; Strips antibodies in 5-10 min at room temp.

GSTP35-R-25-100 130125A

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