

Product Specification Sheet

**Glutathione Transferase-Pi (GST- $\pi$ ) Antibodies**

**Cat. GSTP11-S** Rabbit Anti-Rat GST-pi antiserum **SIZE:** 100 ul

**Cat. GSTP11-C** Human GST-pi protein Western blot +ve control **SIZE:** 100 ul

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 exist 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 (chr11q13) 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 isothiocyanate; EA; 4-vinylpyridine.

**Source of Antigen and Antibodies**

<b>Antigen</b>	GST- $\pi$ purified by HPLC from rat tissues to homogeneity
<b>Ab Host/type</b>	Rabbit, Polyclonal antiserum Cat # GSTP11-S
<b>2-Ab</b>	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available).
<b>-ve control IgG</b>	Cat # 20009-1, Rabbit (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as -ve control

**Form & Storage of Antibodies**

**Antiserum (unpurified)**

100ul solution lyophilized powder

Supplied in Buffer: 0.05% azide

**Reconstitute** powder in 100 ul PBS

**Storage**

**Short-term:** unopened, undiluted vials for less than a week at 4oC.

**Long-term:** at -20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

**Stability:** 6-12 months at -20oC or below.

**Shipping:** 4oC for solutions and room temp for powder.

**Recommended Usage**

This antiserum has been tested by ELISA (suggested dilution 10-100K) using 50-100 ng/well GST-coated ELISA plates. Actual dilution of antibody will vary depending upon the type of technique used to detect primary antibody such calorimetric or chemiluminescence substrates. The nature and concentration of GST in may also affect antibody concentration.

Antiserum can be diluted 1:500-3K in most Western applications using ADI's chemiluminescent substrates.

**Species Crossreactivity**

Rabbit Anti-GST- $\pi$ , produced against native full-length proteins is likely crossreact with GST- $\pi$  from other species (mouse, human, etc.).

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

GSTP11-S-C

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