# GSTP1 (h): 293T Lysate: sc-171547



The Power to Question

## **BACKGROUND**

Glutathione S-transferases (GSTs) function in the metabolic detoxification of various environmental carcinogens and lipid hydroperoxides. In response to oxidative stress, upregulation of the GST family member GSTP1 occurs, consistent with this function. Furthermore, the GSTP1 gene is subject to CpG island hypermethylation, a state that correlates with human prostatic carcinogenesis. GSTP1 gene hypermethylation can be detected in urine, ejaculate and plasma from men with prostate cancer, potentially making GSTP1 a useful biomarker for prostate cancer screening.

## **REFERENCES**

- Board, P.G., et al. 1992. The human Pi class glutathione transferase sequence at 12q13-q14 is a reverse-transcribed pseudogene. Genomics 14: 470-473.
- Klinga-Levan, K., et al. 1993. Mapping of glutathione transferase (GST) genes in the rat. Hereditas 119: 285-296.
- Xia, C., et al. 1993. The human glutathione S-transferase P1-1 gene: modulation of expression by retinoic acid and Insulin. Biochem. J. 292: 845-850.
- 4. Katagiri, A., et al. 1993. Immunohistochemical detection of P-glycoprotein and GSTP1-1 in testis cancer. Br. J. Cancer 68: 12512-12519.
- 5. Simula, T.P., et al. 1993. Human glutathione S-transferase-expressing *Salmonella typhimurium* tester strains to study the activation/detoxification of mutagenic compounds: studies with halogenated compounds, aromatic amines and aflatoxin B1. Carcinogenesis 14: 1371-1376.
- 6. Morceau, F., et al. 2004. Regulation of glutathione S-transferase P1-1 gene expression by NF $\kappa$ B in tumor necrosis factor  $\alpha$ -treated K-562 leukemia cells. Biochem. Pharmacol. 67: 1227-1238.
- Nagai, F., et al. 2004. Oxidative stress Induces GSTP1 and CYP3A4 expression in the human erythroleukemia cell line, K-562. Biol. Pharm. Bull. 27: 492-495.
- Nakayama, M., et al. 2004. GSTP1 CpG island hypermethylation as a molecular biomarker for prostate cancer. J. Cell. Biochem. 91: 540-552.
- 9. Spurdle, A.B., et al. 2007. A systematic approach to analysing gene-gene interactions: polymorphisms at the microsomal epoxide hydrolase EPHX and glutathione S-transferase GSTM1, GSTT1, and GSTP1 loci and breast cancer risk. Cancer Epidemiol. Biomarkers Prev. 16: 769-774.

## **CHROMOSOMAL LOCATION**

Genetic locus: GSTP1 (human) mapping to 11q13.2.

# **PRODUCT**

GSTP1 (h): 293T Lysate represents a lysate of human GSTP1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

## **STORAGE**

Store at -20 $^{\circ}$  C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

#### **APPLICATIONS**

GSTP1 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive GSTP1 antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

## **RESEARCH USE**

For research use only, not for use in diagnostic procedures.

#### **PROTOCOLS**

See our web site at www.scbt.com for detailed protocols and support products.

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