

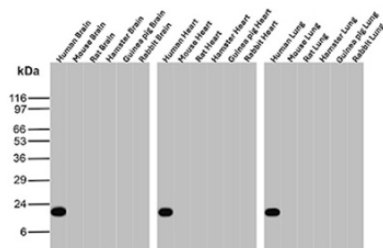
## GSTP1 Antibody / Glutathione S-transferase pi 1 [clone GSTP1/12956R] (V5908)

Catalog No.	Formulation	Size
V5908-100UG	0.2 mg/ml in 1X PBS with 0.05% BSA, 0.05% sodium azide	100 ug
V5908-20UG	0.2 mg/ml in 1X PBS with 0.05% BSA, 0.05% sodium azide	20 ug
V5908SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

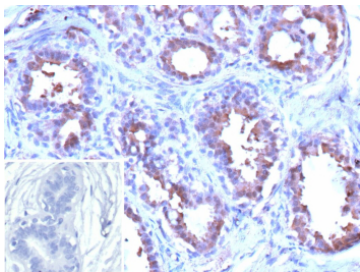
Recombinant **RABBIT MONOCLONAL**

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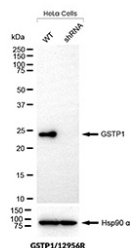
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	GSTP1/12956R
Purity	Protein A affinity
UniProt	P09211
Localization	Cytoplasm, Mitochondrion, Nucleus
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml Western Blot : 2-4ug/ml Knockdown :
Limitations	This GSTP1/Glutathione S-transferase pi 1 antibody is available for research use only.



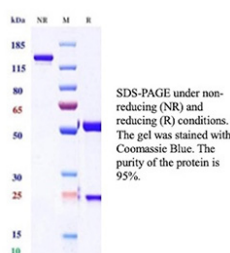
Western blot analysis of human, mouse, rat, hamster, guinea pig, and rabbit brain, heart, and lung tissue lysates probed with recombinant GSTP1/Glutathione S-transferase pi 1 antibody (clone GSTP1/12956R). A single prominent band is detected near the predicted molecular weight of approximately 23 kDa, consistent with Glutathione S-transferase pi 1. The conserved band pattern across multiple tissues and species supports specific detection of GSTP1, a cytosolic phase II detoxification enzyme broadly expressed in epithelial and parenchymal cells.



Formalin-fixed, paraffin-embedded human breast carcinoma stained with recombinant GSTP1/Glutathione S-transferase pi 1 antibody (clone GSTP1/12956R). Tumor epithelial cells show cytoplasmic brown chromogenic staining consistent with GSTP1 expression, while surrounding stromal cells display minimal signal; nuclei are counterstained blue. Inset shows a PBS-only negative control processed without primary antibody, confirming minimal non-specific background staining.



shRNA-mediated knockdown validation of GSTP1 expression by western blot in human HeLa cells using GSTP1/Glutathione S-transferase pi 1 antibody (clone GSTP1/12956R). A band corresponding to the predicted molecular weight of approximately 23 kDa is detected in wild-type cells and is markedly reduced in GSTP1 shRNA knockdown cells, supporting specific detection of Glutathione S-transferase pi 1. Hsp90 alpha is shown as a loading control to confirm comparable protein loading between lanes.



SDS-PAGE Analysis of purified recombinant GSTP1/Glutathione S-transferase pi 1 antibody (clone GSTP1/12956R). Confirmation of Purity and Integrity of Antibody.

## Description

GSTP1 antibody targets Glutathione S-transferase pi 1, a cytosolic phase II detoxification enzyme encoded by the GSTP1 gene. Glutathione S-transferase pi 1 belongs to the pi class of glutathione S-transferases and catalyzes the conjugation of reduced glutathione to a wide range of electrophilic compounds, facilitating their detoxification and elimination. GSTP1 is also commonly referred to as GST pi, GSTP, or GST-pi, and a GSTP1 antibody is widely used to study cellular defense mechanisms against oxidative stress and xenobiotic injury.

Glutathione S-transferase pi 1 is broadly expressed in epithelial tissues and plays a central role in protecting cells from reactive oxygen species, lipid peroxidation products, and environmental toxins. In normal physiology, GSTP1 contributes to redox balance and cellular homeostasis by neutralizing potentially harmful metabolites. Beyond its enzymatic detoxification activity, GSTP1 also participates in non-catalytic signaling functions, including modulation of stress-activated kinase pathways such as JNK signaling. A Glutathione S-transferase pi 1 antibody therefore supports investigations into both metabolic detoxification and stress response regulation.

GSTP1 has significant relevance in cancer biology and toxicology research. Overexpression of Glutathione S-transferase pi 1 is frequently observed in a wide range of solid tumors, including cancers of the lung, breast, colon, prostate, and ovary. Elevated GSTP1 levels are associated with enhanced cellular resistance to chemotherapeutic agents and environmental carcinogens, making GSTP1 a key marker of drug resistance and tumor adaptation. Use of a GSTP1 antibody enables analysis of detoxification capacity, chemoresistance mechanisms, and oxidative stress responses in tumor tissues.

In prostate biology, GSTP1 is particularly notable due to its characteristic epigenetic silencing in prostate adenocarcinoma. Hypermethylation of the GSTP1 promoter leads to loss of Glutathione S-transferase pi 1 expression in malignant prostate epithelial cells, while surrounding benign tissue often retains expression. This unique expression pattern has made GSTP1 a well-established molecular marker in prostate cancer research. A Glutathione S-transferase pi antibody is therefore commonly applied in studies of prostate tumorigenesis and epigenetic regulation.

Structurally, Glutathione S-transferase pi 1 functions as a homodimer and shares conserved domains with other glutathione S-transferase family members. Its activity and expression are regulated by oxidative stress, xenobiotic exposure, and transcriptional control mechanisms linked to cellular defense pathways. Because GSTP1 expression reflects both environmental exposure and cellular stress status, GSTP1 antibody reagents are valuable tools for toxicology, cancer metabolism, and redox biology research.

Clone GSTP1/12956R is designed to recognize Glutathione S-transferase pi 1 and supports detection of GSTP1 expression in research applications. NSJ Bioreagents offers this GSTP1 antibody to support studies of detoxification enzymes, oxidative stress signaling, cancer biology, and drug response mechanisms.

## Application Notes

1. Optimal dilution of the GSTP1/Glutathione S-transferase pi 1 antibody should be determined by the researcher.
2. This GSTP1/Glutathione S-transferase pi 1 antibody is recombinantly produced by expression in CHO cells.

## Immunogen

A recombinant fragment (around amino acids 19-206) of human full-length GSTP1 protein (exact sequence is proprietary) was used as the immunogen for the GSTP1/Glutathione S-transferase pi 1 antibody.

## Storage

GSTP1/Glutathione S-transferase pi 1 antibody with sodium azide - store at 2 to 8°C; antibody without sodium azide - store at -20 to -80°C.