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# GSTP1 Antibody

Catalog # ASC10620

## Product Information

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| **Application** | WB, IF, E, IHC-P |
| **Primary Accession** | P09211 |
| **Other Accession** | NP_000843, 4504183 |
| **Reactivity** | Human, Mouse, Rat |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Isotype** | IgG |
| **Calculated MW** | 23356 |
| **Concentration (mg/ml)** | 1 mg/mL |
| **Conjugate** | Unconjugated |
| **Application Notes** | GSTP1 antibody can be used for the detection of ATG10 by Western blot at 0.5 - 1 □g/mL. Antibody can also be used for immunohistochemistry starting at 2.5 □g/mL. For immunofluorescence start at 20 □g/mL. |

## Additional Information

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| **Gene ID** | 2950 |
| **Other Names** | Glutathione S-transferase P, 2.5.1.18, GST class-pi, GSTP1-1, GSTP1, FAEES3, GST3 |
| **Target/Specificity** | GSTP1; |
| **Reconstitution & Storage** | GSTP1 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures. |
| **Precautions** | GSTP1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures. |

## Protein Information

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| **Name** | GSTP1 ( HGNC:4638) |
| **Synonyms** | FAEES3, GST3 |
| **Function** | Conjugation of reduced glutathione to a wide number of exogenous and endogenous hydrophobic electrophiles. Involved in the formation of glutathione conjugates of both prostaglandin A2 (PGA2) and prostaglandin J2 (PGJ2) (PubMed:9084911). Participates in the formation of novel hepoxilin regioisomers (PubMed:21046276). Negatively regulates CDK5 activity via p25/p35 translocation to prevent neurodegeneration. |

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| **Cellular Location** | Cytoplasm. Mitochondrion. Nucleus. Note=The 83 N-terminal amino acids function as un uncleaved transit peptide, and arginine residues within it are crucial for mitochondrial localization |

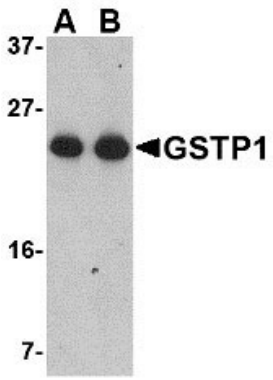
## Background

GSTP1 Antibody: Glutathione S-transferases (GSTs) are a family of enzymes that play an important role in detoxification by catalyzing the conjugation of many hydrophobic and electrophilic compounds with reduced glutathione. Based on their biochemical, immunologic, and structural properties, the soluble GSTs are categorized into 4 main classes: alpha, mu, pi, and theta. The glutathione S-transferase pi gene (GSTP1) is a polymorphic gene encoding active, functionally different GSTP1 variant proteins that are thought to function in xenobiotic metabolism (i.e., the metabolism of environmental mutagens and carcinogens) and may play a role in susceptibility to cancer. More recent experiments have suggested that differential expression of GSTP1 also contributes to the sensitivity of xenobiotics in the substantia nigra and may influence the pathogenesis of reactive oxygen species-induced neurological disorders such as Parkinson's disease. CpG island hypermethylation of the GSTP1 promoter leading to the silencing of the GSTP1 gene has also been linked to cancer.

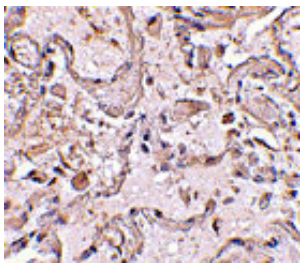
## References

Pearson WR. Phylogenies of glutathione transferase families. Methods Enzymol.2005; 401:186-204.
Clapper ML. Genetic polymorphism and cancer risk. Curr. Oncol. Rep.2000; 2:251-6.
Smeyne M, Boyd J, Shepherd KR, etc. GSTpi expression mediates dopaminergic neuron sensitivity in experimental parkinsonism. Proc. Natl. Acad. Sci. USA2007; 104:1977-82.
Ellinger J, Bastian PJ, Jurgan T, et al. CpG island hypermethylation at multiple gene sites in diagnosis and prognosis of prostate cancer. Urology2008; 71:161-7.

## Images

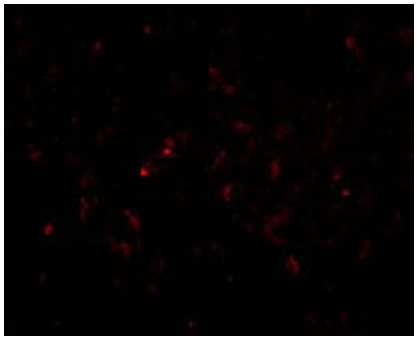



Western blot analysis of GSTP1 in Jurkat cell lysate with GSTP1 antibody at (A) 0.5 and (B) 1 µg/mL.



Immunohistochemical staining of human lung tissue using GSTP1 antibody at 2.5 µg/mL.

Immunofluorescence of GSTP1 in Human Lung cells with GSTP1 antibody at 20 µg/mL.



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