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GSTP1 Antibody

Catalog # ASC10620

Product Information

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

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

Name	GSTP1 (HGNC:4638)
Synonyms	FAEES3, GST3
Function	Catalyzes conjugation of reduced glutathione to a wide number of exogenous and endogenous hydrophobic electrophiles (PubMed:1540159, PubMed:1567427, PubMed:8433974). 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). Acts as a negative regulator of ferroptosis by mediating glutathione conjugation and detoxification of 4-hydroxynonenal

	(4-HNE) reactive aldehyde (PubMed:38016474). Negatively regulates CDK5 activity via p25/p35 translocation to prevent neurodegeneration (PubMed:21668448).
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

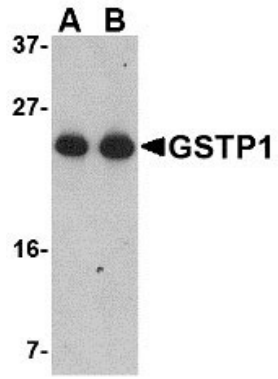
Background

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.

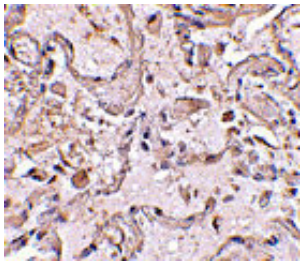
References

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

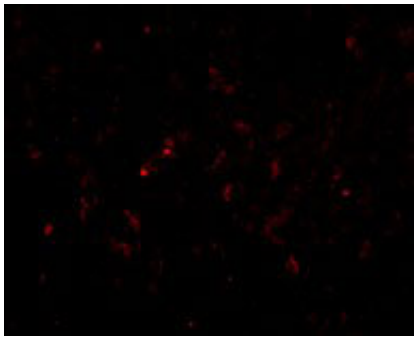


Western blot analysis of GSTP1 in Jurkat cell lysate with GSTP1 antibody at (A) 0.5 and (B) 1 µg/mL.



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.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.