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GSTP1 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP9199c

Product Information

Application	WB, IHC-P, IF, FC, E
Primary Accession	P09211
Reactivity	Human, Mouse, Rat
Predicted	Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	23356
Antigen Region	97-126

Additional Information

Gene ID	2950
Other Names	Glutathione S-transferase P, GST class-pi, GSTP1-1, GSTP1, FAEES3, GST3
Target/Specificity	This GSTP1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 97-126 amino acids from the Central region of human GSTP1.
Dilution	WB~~1:1000 IHC-P~~1:100~500 IF~~1:10~50 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	GSTP1 Antibody (Center) 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

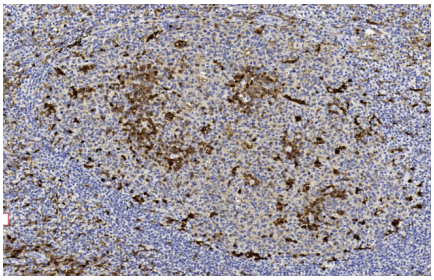
Background

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. This GST family member is a polymorphic gene encoding active, functionally different GSTP1 variant proteins that are thought to function in xenobiotic metabolism and play a role in susceptibility to cancer, and other diseases.

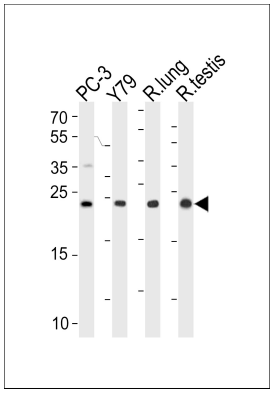
References

Cho,H.J., et.al., Cancer Genet. Cytogenet. 198 (1), 40-46 (2010)
Kanai,M., et.al., Cancer Epidemiol 34 (2), 189-193 (2010)
Davila,S., et.al., Genes Immun. 11 (3), 232-238 (2010)

Images

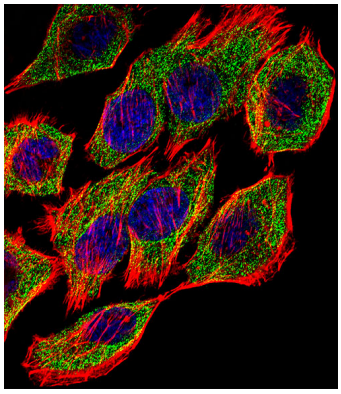


Immunohistochemical analysis of paraffin-embedded Human tonsil section using Pink1(Cat#AP9199c). AP9199c was diluted at 1:2000 dilution. A undiluted biotinylated goat polyvalent antibody was used as the secondary, followed by DAB staining.

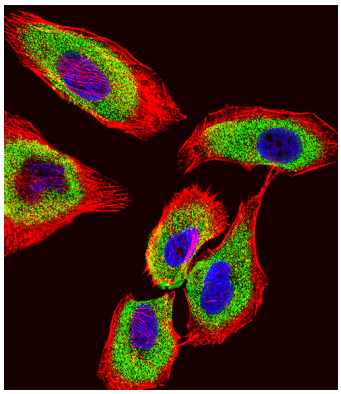


GSTP1 Antibody (Center) (Cat. #AP9199c) western blot analysis in PC-3,Y79 cell line ,rat lung and testis tissue lysates (35ug/lane).This demonstrates the GSTP1 antibody detected the GSTP1 protein (arrow).

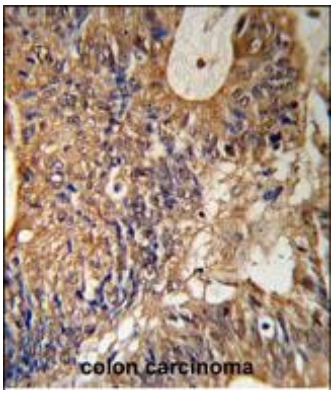
Fluorescent confocal image of A549 cell stained with GSTP1 Antibody (Center)(Cat#AP9199c).A549 cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.1%, 10 min), then incubated with GSTP1 primary



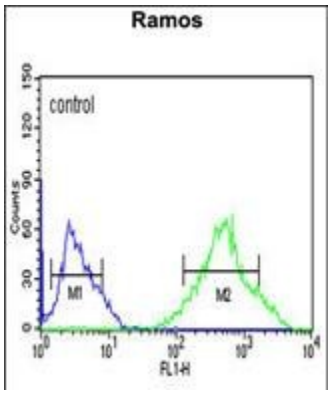
antibody (1:25, 1 h at 37°C). For secondary antibody, Alexa Fluor® 488 conjugated donkey anti-rabbit antibody (green) was used (1:400, 50 min at 37°C).Cytoplasmic actin was counterstained with Alexa Fluor® 555 (red) conjugated Phalloidin (7units/ml, 1 h at 37°C). Nuclei were counterstained with DAPI (blue) (10 µg/ml, 10 min). GSTP1 immunoreactivity is localized to Cytoplasm and Mitochondria significantly.



Fluorescent confocal image of A549 cell stained with GSTP1 Antibody (Center)(Cat#AP9199c).A549 cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.1%, 10 min), then incubated with GSTP1 primary antibody (1:25, 1 h at 37°C). For secondary antibody, Alexa Fluor® 488 conjugated donkey anti-rabbit antibody (green) was used (1:400, 50 min at 37°C).Cytoplasmic actin was counterstained with Alexa Fluor® 555 (red) conjugated Phalloidin (7units/ml, 1 h at 37°C). Nuclei were counterstained with DAPI (blue) (10 µg/ml, 10 min). GSTP1 immunoreactivity is localized to Cytoplasm significantly.



GSTP1 Antibody (Center) (RB20807) IHC analysis in formalin fixed and paraffin embedded human colon carcinoma followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the GSTP1 Antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.



GSTP1 Antibody (Center) (Cat. #AP9199c) flow cytometric analysis of Ramos cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

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