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GSTP1 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1078a

Product Information

Application	WB, IHC, FC, ICC, E
Primary Accession	P09211
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	3F2C2
Isotype	IgG1
Calculated MW	23356
Description	GSTP1 (glutathione-S-transferase, pi 1), also called GST3/DFN7, is a family of enzymes that play an important role in detoxification by catalyzing the conjugation of many hydrophobic and electrophilic compounds with reduced glutathione. GSTP1 act like a tumor suppressor gene, which when inactivated leads to tumor growth, and the -class glutathione S-transferase is commonly inactivated by somatic CpGisland hypermethylation in cancers of the prostate, liver, and breast. Methylation of regulatory sequences at the GSTP1 gene locus is found in the vast majority (>90%) of prostate carcinomas and is associated with transcriptional down-regulation.
Immunogen	Purified recombinant fragment of human GSTP1 expressed in E. Coli.
Formulation	Ascitic fluid containing 0.03% sodium azide.

Additional Information

Gene ID	2950
Other Names	Glutathione S-transferase P, 2.5.1.18, GST class-pi, GSTP1-1, GSTP1, FAEES3, GST3
Dilution	WB~~1/500 - 1/2000 IHC~~1/500 - 1/2000 FC~~1/200 - 1/400 ICC~~N/A E~~N/A
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
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

References

1. Kimihiko Satoh, Ken Itoh, Masayuki Yamamoto. 2002. Carcinogenesis. 23: 457 - 462.2. Xiaohui Lin,William G. Nelson.2003.Cancer Research. 63: 498-504.

Images

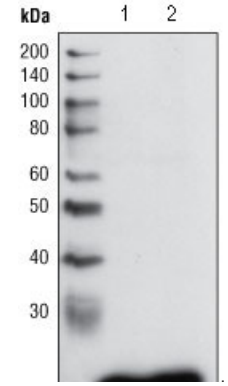


Figure 1: Western blot analysis using GSTP1 mouse mAb against PC3 cell lysate (1) and human cerebellum tissue lysate (2).

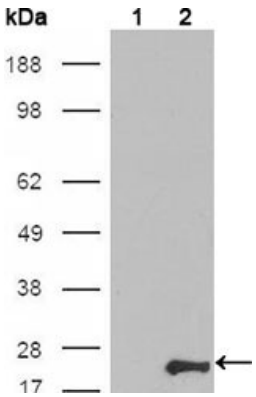
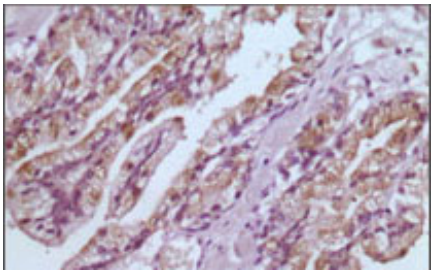


Figure 2: Western blot analysis using GSTP1 mouse mAb against HEK293T cells transfected with the pCMV6-ENTRY control (1) and pCMV6-ENTRY GSTP1 cDNA (2).

Figure 3: Immunohistochemical analysis of paraffin-embedded human prostate tissues using GSTP1 mouse mAb with DAB staining.



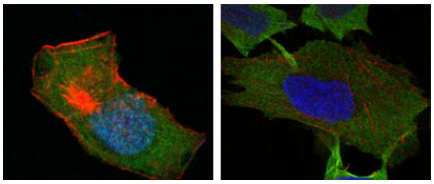


Figure 4: Confocal immunofluorescence analysis of HepG2 (left) and L-02 (right) cells using GSTP1 mouse mAb (green). Red: Actin filaments have been labeled with DY-554 phalloidin. Blue: DRAQ5 fluorescent DNA dye.

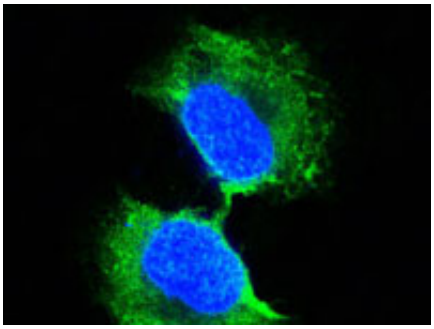


Figure 5: Confocal immunofluorescence analysis of PC-3 cells using GSTP1 mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye.

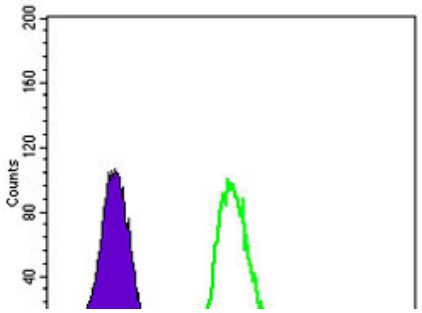


Figure 6: Flow cytometric analysis of K562 cells using GSTP1 mouse mAb (green) and negative control (purple).