10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

GSTM1 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1646a

Product Information

Application	WB, IHC, FC, E
Primary Accession	P09488
Reactivity	Human, Rat
Host	Mouse
Clonality	Monoclonal
Clone Names	1H4F2
Isotype	IgG1
Calculated MW	25712
Description	Cytosolic and membrane-bound forms of glutathione S-transferase are encoded by two distinct supergene families. At present, eight distinct classes of the soluble cytoplasmic mammalian glutathione S-transferases have been identified: alpha, kappa, mu, omega, pi, sigma, theta and zeta. This gene encodes a glutathione S-transferase that belongs to the mu class. The mu class of enzymes functions in the detoxification of electrophilic compounds, including carcinogens, therapeutic drugs, environmental toxins and products of oxidative stress, by conjugation with glutathione. The genes encoding the mu class of enzymes are organized in a gene cluster on chromosome 1p13.3 and are known to be highly polymorphic. These genetic variations can change an individual's susceptibility to carcinogens and toxins as well as affect the toxicity and efficacy of certain drugs. Null mutations of this class mu gene have been linked with an increase in a number of cancers, likely due to an increased susceptibility to environmental toxins and carcinogens. Multiple protein isoforms are encoded by transcript variants of this gene.
Immunogen	Purified recombinant fragment of human GSTM1 expressed in E. Coli.
Formulation	Ascitic fluid containing 0.03% sodium azide.

Additional Information

Gene ID	2944
Other Names	Glutathione S-transferase Mu 1, 2.5.1.18, GST HB subunit 4, GST class-mu 1, GSTM1-1, GSTM1a-1a, GSTM1b-1b, GTH4, GSTM1, GST1
Dilution	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 FC~~1/200 - 1/400 E~~1/10000
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	GSTM1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	GSTM1 (HGNC:4632)
Synonyms	GST1
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).
Cellular Location	Cytoplasm.
Tissue Location	Liver (at protein level).

References

1. J Exp Clin Cancer Res. 2009 Apr 1;28:46. 2. Cancer Prev Res (Phila). 2009 Apr;2(4):345-52.

Images

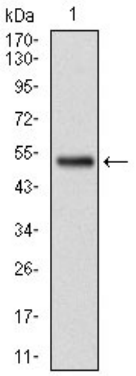


Figure 1: Western blot analysis using GSTM1 mAb against human GSTM1 (AA: 23-181) recombinant protein. (Expected MW is 25.7 kDa)

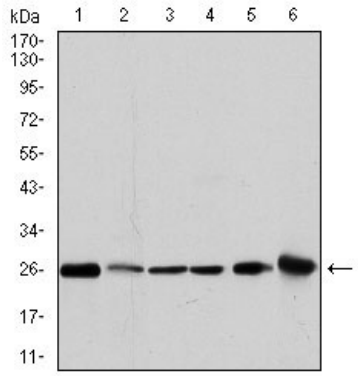


Figure 2: Western blot analysis using GSTM1 mouse mAb against MCF-7 (1), PC-12 (2), Jurkat (3), Hela (4), HL7702 (5) and HepG2 (6) cell lysate.

Figure 3: Immunohistochemical analysis of paraffin-embedded stomach cancer tissues using GSTM1 mouse mAb with DAB staining.

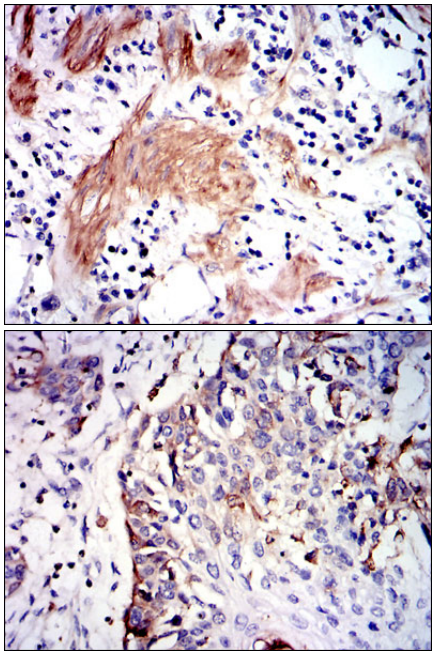


Figure 4: Immunohistochemical analysis of paraffin-embedded esophageal cancer tissues using GSTM1 mouse mAb with DAB staining.

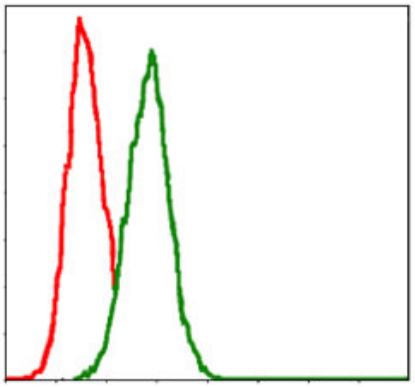


Figure 5: Flow cytometric analysis of Hela cells using GSTM1 mouse mAb (green) and negative control (red).

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