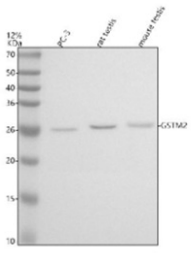
GSTM2 Antibody / Glutathione S-transferase Mu 2 (FY13243)

Catalog No.	Formulation	Size
FY13243	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	P28161
Applications	Western Blot : 0.25-0.5ug/ml
Limitations	This GSTM2 antibody is available for research use only.



Western blot analysis of GSTM2 using anti-GSTM2 antibody. Electrophoresis was performed on a 12% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: human PC-3 whole cell lysates, Lane 2: rat testis tissue lysates, Lane 3: mouse testis tissue lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-GSTM2 antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using an ECL Plus Western Blotting Substrate. A specific band was detected for GSTM2 at approximately 26 kDa. The expected molecular weight of GSTM2 is ~26 kDa.

Description

GSTM2 antibody detects Glutathione S-transferase Mu 2, an enzyme involved in detoxification and cellular defense against oxidative stress. The UniProt recommended name is Glutathione S-transferase Mu 2 (GSTM2). This cytosolic enzyme catalyzes the conjugation of reduced glutathione to a wide variety of electrophilic compounds, promoting their solubility and excretion while protecting macromolecules from oxidative and chemical damage.

Functionally, GSTM2 antibody identifies a 218-amino-acid enzyme belonging to the Mu class of the glutathione S-transferase family. GSTM2 participates in phase II detoxification pathways by binding and neutralizing toxic metabolites, drugs, and environmental carcinogens. It exhibits substrate specificity toward lipid peroxidation products, reactive oxygen species intermediates, and xenobiotic compounds. GSTM2 is also involved in modulating signaling pathways such as JNK and MAPK, linking oxidative stress defense to cell survival and apoptosis regulation.

The GSTM2 gene is located on chromosome 1p13.3 and is primarily expressed in liver, skeletal muscle, and brain. Its expression levels vary between individuals due to polymorphisms in the GSTM gene cluster, influencing susceptibility to toxins and disease. As a member of the Mu family, GSTM2 functions alongside other isoenzymes (GSTM1-GSTM5) to maintain redox balance and detoxification capacity.

Pathologically, reduced GSTM2 expression or polymorphic variants have been associated with increased risk of cancer, neurodegenerative disease, and drug-induced toxicity. Elevated GSTM2 levels can enhance cellular resistance to chemotherapy and oxidative damage. Research using GSTM2 antibody supports studies in toxicology, pharmacogenomics, and oxidative stress biology.

GSTM2 antibody is validated for western blotting, immunohistochemistry, and ELISA to detect detoxification enzymes. NSJ Bioreagents provides GSTM2 antibody reagents optimized for research in redox regulation, xenobiotic metabolism, and antioxidant defense.

Structurally, Glutathione S-transferase Mu 2 forms a homodimer with each subunit containing a glutathione-binding (G-site) domain and a hydrophobic substrate-binding (H-site). Its tertiary structure supports efficient conjugation reactions and dynamic interaction with glutathione substrates. This antibody enables investigation of GSTM2's function in metabolic detoxification and cellular stress response.

Application Notes

Optimal dilution of the GSTM2 antibody should be determined by the researcher.

Immunogen

A synthetic peptide corresponding to a sequence in the middle region of human GSTM2 was used as the immunogen for the GSTM2 antibody.

Storage

After reconstitution, the GSTM2 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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