

GSTM (G-20)-R: sc-28503-R

BACKGROUND

Members of the glutathione S-transferase (GST) family of proteins function in the detoxification of xenobiotics to protect cells against toxicant-induced damage. There are eight families of GST proteins, namely α , ζ , θ , κ , μ , π , σ and ω , each of which are composed of proteins that have a variety of functions throughout the cell. The GSTM proteins (GSTM1-GSTM5 in human and GSTM1-GSTM7 in mouse) are members of the mu class of enzymes that conjugate with glutathione and function in the detoxification of carcinogens, environmental toxins and products of oxidative stress.

REFERENCES

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- Massey, T.E., et al. 2000. Mechanisms of Aflatoxin B1 lung tumorigenesis. *Exp. Lung Res.* 26: 673-683.
- Raza, H., et al. 2002. Multiple isoforms of mitochondrial glutathione S-transferases and their differential induction under oxidative stress. *Biochem. J.* 366: 45-55.
- Bartley, P.A., et al. 2003. Regulation of the gene encoding glutathione S-transferase M1 (GSTM1) by the Myb oncoprotein. *Oncogene* 22: 7570-7575.
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- Shang, W., et al. 2008. Expressions of glutathione S-transferase α , μ , and π in brains of medically intractable epileptic patients. *BMC Neurosci.* 9: 67.
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CHROMOSOMAL LOCATION

Genetic locus: GSTM1/GSTM2/GSTM4/GSTM5 (human) mapping to 1p13.3; Gstm1/Gstm3 (mouse) mapping to 3 F2.3.

SOURCE

GSTM (G-20)-R is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the N-terminus of GSTM1 of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-28503 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

GSTM (G-20)-R is recommended for detection of GSTM1 and 3 of mouse and rat origin and, to a lesser extent, GSTM1, 2, 4 and 5 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

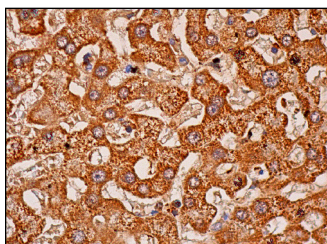
Molecular Weight of all GSTM proteins: 26 kDa.

Positive Controls: 3T3-L1 cell lysate: sc-2243 or mouse liver extract: sc-2256.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz[™]: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



GSTM (G-20)-R: sc-28503-R. Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic staining of hepatocytes.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

MONOS
Satisfaction
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Try **GSTM1 (1H4F2): sc-517197**, our highly recommended monoclonal alternative to GSTM (G-20).