

# GSTM (FL-218): sc-292368

## 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  $\alpha$ ,  $\zeta$ ,  $\theta$ ,  $\kappa$ ,  $\mu$ ,  $\pi$ ,  $\sigma$  and  $\omega$ , 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

- McGuire, S., et al. 1997. Increased levels of glutathione S transferases and appearance of novel  $\alpha$  class isoenzymes in kidneys of mice exposed to mercuric chloride. I. Biochemical and immunohistochemical studies. *Nephron* 77: 452-460.
- 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.
- Breton, C.V., et al. 2007. GSTM1 and APE1 genotypes affect arsenic-induced oxidative stress: a repeated measures study. *Environ. Health* 6: 39.
- Shang, W., et al. 2008. Expressions of glutathione S-transferase  $\alpha$ ,  $\mu$ , and  $\pi$  in brains of medically intractable epileptic patients. *BMC Neurosci.* 9: 67.
- Lucena, M.I., et al. 2008. Glutathione S-transferase  $\mu$ 1 and  $\tau$ 1 null genotypes increase susceptibility to idiosyncratic drug-induced liver injury. *Hepatology* 48: 588-596.

## CHROMOSOMAL LOCATION

Genetic locus: GSTM1/GSTM2/GSTM3/GSTM4/GSTM5 (human) mapping to 1p13.3; Gstm1/Gstm2/Gstm3/Gstm4/Gstm5/Gstm6/Gstm7 (mouse) mapping to 3 F2.3

## SOURCE

GSTM (FL-218) is a rabbit polyclonal antibody raised against amino acids 1-218 representing full length GSTM2 of human origin.

## PRODUCT

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

## STORAGE

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

## APPLICATIONS

GSTM (FL-218) is recommended for detection of GSTM1, GSTM2, GSTM3, GSTM4 and GSTM5 of mouse, rat and human origin and Gstm6 and Gstm7 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

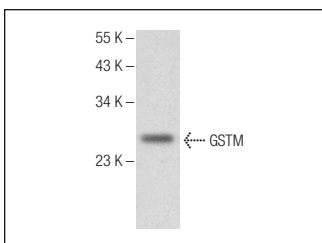
Molecular Weight of all GSTM proteins: 26 kDa.

Positive Controls: mouse liver extract/PE: sc-24926, 3T3-L1 cell lysate: sc-2243 or A-673 cell lysate: sc-2414.

## 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.

## DATA



GSTM (FL-218): sc-292368. Western blot analysis of GSTM expression in A-673 whole cell lysate.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

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Try **GSTM1 (1H4F2): sc-517197**, our highly recommended monoclonal alternative to GSTM (FL-218).