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# GSTM3 (h2): 293T Lysate: sc-173322

## 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  $\alpha$ ,  $\kappa$ ,  $\mu$ ,  $\omega$ ,  $\pi$ ,  $\sigma$ ,  $\theta$  and  $\zeta$ , 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. GSTM3 is a 225 amino acid protein that is expressed in the testis and brain. Localized to the cytoplasm, GSTM3 exists as a homodimer.

## REFERENCES

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2. Patskovsky, Y.V., et al. 1999. An asparagine-phenylalanine substitution accounts for catalytic differences between hGSTM3-3 and other human class  $\mu$  glutathione S-transferases. *Biochemistry* 38: 16187-16194.
3. Massey, T.E., et al. 2000. Mechanisms of Aflatoxin B1 lung tumorigenesis. *Exp. Lung Res.* 26: 673-683.
4. Raza, H., et al. 2002. Multiple isoforms of mitochondrial glutathione S-transferases and their differential induction under oxidative stress. *Biochem. J.* 366: 45-55.
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6. 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.
7. Lucena, M.I., et al. 2008. Glutathione S-transferase m1 and t1 null genotypes increase susceptibility to idiosyncratic drug-induced liver injury. *Hepatology* 48: 588-596.
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## CHROMOSOMAL LOCATION

Genetic locus: GSTM3 (human) mapping to 1p13.3.

## PRODUCT

GSTM3 (h2): 293T Lysate represents a lysate of human GSTM3 transfected 293T cells and is provided as 100  $\mu$ g protein in 200  $\mu$ l SDS-PAGE buffer.

## RESEARCH USE

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

## APPLICATIONS

GSTM3 (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive GSTM3 antibodies. Recommended use: 10-20  $\mu$ l per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

## STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

## PROTOCOLS

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