

# GSTM-R (C-15): sc-28502-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  $\alpha$ ,  $\kappa$ ,  $\mu$ ,  $\omega$ ,  $\pi$ ,  $\sigma$ ,  $\theta$  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. The  $\mu$  proteins are encoded by genes that form a cluster on chromosome 1p13.3 and are known to be highly polymorphic, affecting an individual's susceptibility to toxins. Mutations in the genes encoding GSTM proteins are associated with tumor progression, suggesting an important role for GSTM proteins in carcinogenesis.

## REFERENCES

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## CHROMOSOMAL LOCATION

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

## SOURCE

GSTM (C-15)-R is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of GSTM 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.

Blocking peptide available for competition studies, sc-28502 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

GSTM (C-15)-R is recommended for detection of GSTM1, GSTM2, GSTM4 and GSTM5 of human origin and, to a lesser extent, GSTM1, GSTM2, GSTM6 and GSTM7 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

GSTM (C-15)-R is also recommended for detection of GSTM1, GSTM2, GSTM4 and GSTM5 in additional species, including porcine.

Molecular Weight of all GSTM proteins: 26 kDa.

Positive Controls: human liver extract: sc-363766 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) 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.

## STORAGE

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

## 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.



Try **GSTM1 (1H4F2): sc-517197**, our highly recommended monoclonal alternative to GSTM (C-15).