

# GSTT2 (K-15): sc-86146

## BACKGROUND

Glutathione (GSH) is a tripeptide antioxidant which reduces disulfide bonds between cytoplasmic proteins. The constitutive enzyme glutathione reductase transforms glutathione into its reduced state which ultimately can provide a measure of cellular toxicity. GSTT2 (glutathione S-transferase  $\theta$ -2), also known as GST class- $\theta$ -2, is a 244 amino acid enzyme with sulfatase activity that functions in conjugating reduced glutathione to hydrophobic electrophiles. GSTT2 exists as a homodimer in the cytoplasm and is expressed in low levels in the liver and the lung. GSTT2 belongs to the GST superfamily and contains both a GST C-terminal and a GST N-terminal domain. The gene encoding GSTT2 exists on human chromosome 22.

## REFERENCES

- Hussey, A.J. and Hayes, J.D. 1992. Characterization of a human class- $\theta$  glutathione S-transferase with activity towards 1-menaphthyl sulphate. *Biochem. J.* 286: 929-935.
- Tan, K.L., Webb, G.C., Baker, R.T. and Board, P.G. 1995. Molecular cloning of a cDNA and chromosomal localization of a human  $\theta$ -class glutathione S-transferase gene (GSTT2) to chromosome 22. *Genomics* 25: 381-387.
- Mainwaring, G.W., Williams, S.M., Foster, J.R., Tugwood, J. and Green, T. 1996. The distribution of  $\theta$ -class glutathione S-transferases in the liver and lung of mouse, rat and human. *Biochem. J.* 318: 297-303.
- Rosshohn, J., McKinstry, W.J., Oakley, A.J., Verger, D., Flanagan, J., Chelvanayagam, G., Tan, K.L., Board, P.G. and Parker, M.W. 1998. Human  $\theta$  class glutathione transferase: the crystal structure reveals a sulfate-binding pocket within a buried active site. *Structure* 6: 309-322.
- Sprenger, R., Schlagenhauer, R., Kerb, R., Bruhn, C., Brockmüller, J., Roots, I. and Brinkmann, U. 2000. Characterization of the glutathione S-transferase GSTT1 deletion: discrimination of all genotypes by polymerase chain reaction indicates a trimodular genotype-phenotype correlation. *Pharmacogenetics* 10: 557-565.
- Pastore, A., Piemonte, F., Locatelli, M., Lo Russo, A., Gaeta, L.M., Tozzi, G. and Federici, G. 2001. Determination of blood total, reduced, and oxidized glutathione in pediatric subjects. *Clin. Chem.* 47: 1467-1469.
- Pompella, A., Visvikis, A., Paolicchi, A., De Tata, V. and Casini, A.F. 2003. The changing faces of glutathione, a cellular protagonist. *Biochem. Pharmacol.* 66: 1499-1503.

## CHROMOSOMAL LOCATION

Genetic locus: GSTT2 (human) mapping to 22q11.23.

## SOURCE

GSTT2 (K-15) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of GSTT2 of human origin.

## STORAGE

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

## PRODUCT

Each vial contains 100  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-86146 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

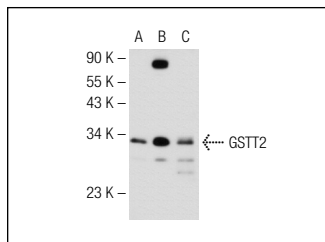
GSTT2 (K-15) is recommended for detection of GSTT2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for GSTT2 siRNA (h): sc-105429, GSTT2 shRNA Plasmid (h): sc-105429-SH and GSTT2 shRNA (h) Lentiviral Particles: sc-105429-V.

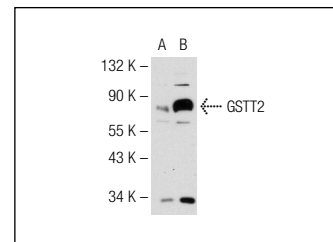
Molecular Weight of GSTT2: 27 kDa.

Positive Controls: AN3 CA cell lysate: sc-24662 or GSTT2 (h4): 293T Lysate: sc-128757.

## DATA



GSTT2 (K-15): sc-86146. Western blot analysis of GSTT2 expression in non-transfected 293T: sc-117752 (A), human GSTT2 transfected 293T: sc-128756 (B) and AN3 CA (C) whole cell lysates.



GSTT2 (K-15): sc-86146. Western blot analysis of GSTT2 expression in non-transfected: sc-117752 (A) and human GSTT2 transfected: sc-128757 (B) 293T whole cell lysates.

## 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.

**MONOS**  
Satisfaction  
Guaranteed

Try **GSTT2 (D-1): sc-514667**, our highly recommended monoclonal alternative to GSTT2 (K-15).