

# GSTK1 (M-14): sc-160411

## 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. GSTK1 (glutathione S-transferase kappa 1), also known as glutathione S-transferase subunit 13 (GST 13-13) or GSTK1-1, is a 226 amino acid ubiquitously expressed protein belonging to the  $\kappa$  class of the GST superfamily that functions in cellular detoxification. Localizing to peroxisome, GSTK1 exists as a homodimer that catalyzes the conjugation of glutathione to a number of hydrophobic substrates leading to their removal from the cell.

## REFERENCES

1. Pemble, S.E., Wardle, A.F. and Taylor, J.B. 1996. Glutathione S-transferase class  $\kappa$ : characterization by the cloning of rat mitochondrial GST and identification of a human homologue. *Biochem. J.* 319: 749-754.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 602321. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
3. Jowsey, I.R., Thomson, R.E., Orton, T.C., Elcombe, C.R. and Hayes, J.D. 2003. Biochemical and genetic characterization of a murine class  $\kappa$  glutathione S-transferase. *Biochem. J.* 373: 559-569.
4. Robinson, A., Huttley, G.A., Booth, H.S. and Board, P.G. 2004. Modelling and bioinformatics studies of the human  $\kappa$ -class glutathione transferase predict a novel third glutathione transferase family with similarity to prokaryotic 2-hydroxychromene-2-carboxylate isomerases. *Biochem. J.* 379: 541-552.
5. Morel, F., Rauch, C., Petit, E., Piton, A., Theret, N., Coles, B. and Guillouzo, A. 2004. Gene and protein characterization of the human glutathione S-transferase  $\kappa$  and evidence for a peroxisomal localization. *J. Biol. Chem.* 279: 16246-16253.

## CHROMOSOMAL LOCATION

Genetic locus: GSTK1 (human) mapping to 7q34; Gstk1 (mouse) mapping to 6 B2.1.

## SOURCE

GSTK1 (M-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of GSTK1 of mouse 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-160411 P, (100  $\mu$ 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

GSTK1 (M-14) is recommended for detection of GSTK1 of mouse, rat and, to a lesser extent, 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); non cross-reactive with other GST family members.

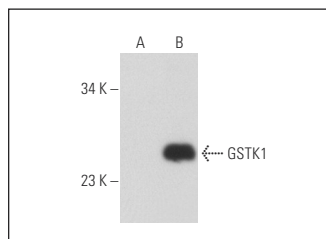
Suitable for use as control antibody for GSTK1 siRNA (h): sc-89816, GSTK1 siRNA (m): sc-145809, GSTK1 shRNA Plasmid (h): sc-89816-SH, GSTK1 shRNA Plasmid (m): sc-145809-SH, GSTK1 shRNA (h) Lentiviral Particles: sc-89816-V and GSTK1 shRNA (m) Lentiviral Particles: sc-145809-V.

Molecular Weight of GSTK1: 30 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



GSTK1 (M-14): sc-160411. Western blot analysis of GSTK1 expression in non-transfected: sc-117752 (A) and human GSTK1 transfected: sc-110883 (B) 293T whole cell lysates.

## STORAGE

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

**MONOS**  
Satisfaction  
Guaranteed

Try **GSTK1 (E-4): sc-515580**, our highly recommended monoclonal alternative to GSTK1 (M-14).