

# GSTT (D-1): sc-393035

## BACKGROUND

The GST superfamily is made up of several subfamilies. Glutathione S-transferase-105429se P (GSTP1) belongs to the  $\pi$  subfamily and is involved in the conjugation of reduced glutathione to a variety of endogenous and exogenous hydrophobic electrophiles. Glutathione S-transferase  $\mu$ 1 (GSTM1) is a cytoplasmic liver protein belonging to the  $\mu$  family and has the same basic functions as GSTP1-1. Glutathione S-transferase  $\theta$  1 (GSTT1) is a cytoplasmic homodimer expressed in erythrocytes. It belongs to the  $\theta$  family. Aside from being active in the reduced glutathione conjugation, this protein displays glutathione peroxidase activity with cumene hydroperoxide.

## REFERENCES

1. Meyer, D.J., et al. 1991.  $\theta$ , a new class of glutathione transferases purified from rat and man. *Biochem. J.* 274: 409-414.
2. Pemble, S., et al. 1994. Human glutathione S-transferase  $\theta$  (GSTT1): cDNA cloning and the characterization of a genetic polymorphism. *Biochem. J.* 300: 271-276.
3. Mainwaring, G.W., et al. 1996. The distribution of  $\theta$ -class glutathione S-transferases in the liver and lung of mouse, rat and human. *Biochem. J.* 318: 297-303.
4. Jemth, P. and Mannervik, B. 1997. Kinetic characterization of recombinant human glutathione transferase T1-1, a polymorphic detoxication enzyme. *Arch. Biochem. Biophys.* 348: 247-254.

## CHROMOSOMAL LOCATION

Genetic locus: GSTT1/GSTT3 (human) mapping to 22q11.23; Gsst1/Gstt3 (mouse) mapping to 10 C1.

## SOURCE

GSTT (D-1) is a mouse monoclonal antibody raised against amino acids 1-240 representing full length GSTT1 of human origin.

## PRODUCT

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

GSTT (D-1) is available conjugated to agarose (sc-393035 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393035 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393035 PE), fluorescein (sc-393035 FITC), Alexa Fluor<sup>®</sup> 488 (sc-393035 AF488), Alexa Fluor<sup>®</sup> 546 (sc-393035 AF546), Alexa Fluor<sup>®</sup> 594 (sc-393035 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-393035 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-393035 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-393035 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor<sup>®</sup> is a trademark of Molecular Probes, Inc., Oregon, USA

## STORAGE

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

## APPLICATIONS

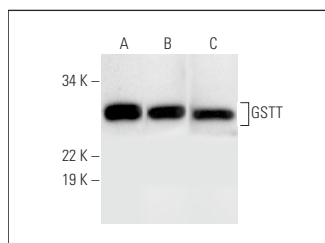
GSTT (D-1) is recommended for detection of GSTT1 and GSTT3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Positive Controls: mouse liver extract: sc-2256, human liver extract: sc-363766 or Hep G2 cell lysate: sc-2227.

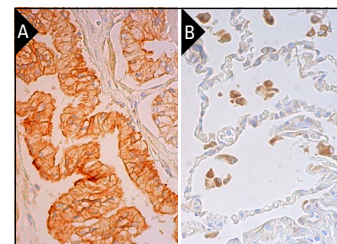
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 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 m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG $\kappa$  BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



GSTT (D-1): sc-393035. Western blot analysis of GSTT expression in mouse liver (A) and human liver (B) tissue extracts and Hep G2 whole cell lysate (C).



GSTT (D-1): sc-393035. Immunoperoxidase staining of formalin fixed, paraffin-embedded human prostate tissue showing cytoplasmic and membrane staining of glandular cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human lung tissue showing cytoplasmic and nuclear staining of macrophages. Blocked with 0.25X UltraCruz<sup>®</sup> Blocking Reagent: sc-516214. Detection reagents used: m-IgG $\kappa$  BP-B: sc-516142 and ImmunoCruz<sup>®</sup> ABC Kit: sc-516216 (B).

## 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) for detailed protocols and support products.