

# GSTT2 (D-1): sc-514667



The Power to Question

## 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., et al. 1992. Characterization of a human class- $\theta$  glutathione S-transferase with activity towards 1-menaphthyl sulphate. *Biochem. J.* 286: 929-935.
- Tan, K.L., et al. 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., 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.

## CHROMOSOMAL LOCATION

Genetic locus: GSTT2/GSTT2B (human) mapping to 22q11.23; Gsst2 (mouse) mapping to 10 C1.

## SOURCE

GSTT2 (D-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 145-168 within an internal region of GSTT2 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

GSTT2 (D-1) is available conjugated to agarose (sc-514667 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514667 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514667 PE), fluorescein (sc-514667 FITC), Alexa Fluor<sup>®</sup> 488 (sc-514667 AF488), Alexa Fluor<sup>®</sup> 546 (sc-514667 AF546), Alexa Fluor<sup>®</sup> 594 (sc-514667 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-514667 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-514667 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-514667 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-514667 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## STORAGE

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

## APPLICATIONS

GSTT2 (D-1) is recommended for detection of GSTT2 and GSTT2B of human origin, and GSTT2 of mouse and rat 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for GSTT2 siRNA (m): sc-145818, GSTT2 shRNA Plasmid (m): sc-145818-SH and GSTT2 shRNA (m) Lentiviral Particles: sc-145818-V.

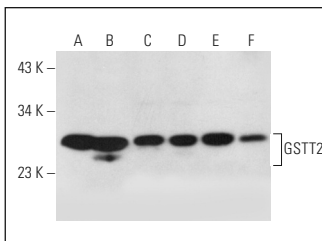
Molecular Weight of GSTT2: 27 kDa.

Positive Controls: human liver extract: sc-363766, Hep G2 cell lysate: sc-2227 or AN3 CA cell lysate: sc-24662.

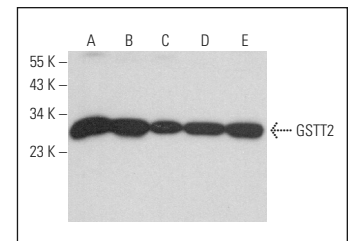
## RECOMMENDED SUPPORT REAGENTS

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.

## DATA



GSTT2 (D-1): sc-514667. Western blot analysis of GSTT2 expression in Hep G2 (A), AN3 CA (B), HeLa (C) and A549 (D) whole cell lysates and human liver (E) and human prostate (F) tissue extracts.



GSTT2 (D-1): sc-514667. Western blot analysis of GSTT2 expression in Hep G2 (A), DU 145 (B), NAMALWA (C), WEHI-231 (D) and c4 (E) whole cell lysates.

## SELECT PRODUCT CITATIONS

- Tiwari, S., et al. 2020. Gender-specific changes in energy metabolism and protein degradation as major pathways affected in livers of mice treated with ibuprofen. *Sci. Rep.* 10: 3386.
- Weh, K.M., et al. 2022. Proanthocyanidins mitigate bile acid-induced changes in GSTT2 levels in a panel of racially diverse patient-derived primary esophageal cell cultures. *Mol. Carcinog.* 61: 281-287.

## RESEARCH USE

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

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