# SANTA CRUZ BIOTECHNOLOGY, INC.

# GSTT2 (D-1): sc-514667



#### 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

- 1. 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.
- 2. 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.

#### **CHROMOSOMAL LOCATION**

Genetic locus: GSTT2/GSTT2B (human) mapping to 22q11.23; Gstt2 (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  $\mu g$  lgG\_{2a} 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).

Alexa Fluor® 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**

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 µg per 100-500 µg 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 siRNA (m): sc-145818, GSTT2 shRNA Plasmid (h): sc-105429-SH, GSTT2 shRNA Plasmid (m): sc-145818-SH, GSTT2 shRNA (h) Lentiviral Particles: sc-105429-V 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 K BP-HRP: sc-516102 or m-IgG K 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 K BP-FITC: sc-516140 or m-IgG K 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 (Å), AN3 CA (₿), 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.