SANTA CRUZ BIOTECHNOLOGY, INC.

GGT1 (E-5): sc-166908

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

GGT (γ-glutamyltranspeptidase) acts as a glutathionase and catalyzes the transfer of the glutamyl moiety of glutathione to a variety of amino acids and dipeptide acceptors. This enzyme is located on the outer surface of the cell membrane and is widely distributed in mammalian tissues involved in absorption and secretion. In humans, hepatic GGT activity is elevated in some liver diseases. GGT1 is released into the bloodstream after liver damage, and an elevated level of the enzyme may be a useful early sign of hepatocellular carcinoma. GGT5 converts leukotriene C4 to leukotriene D4; it does not, however, convert synthetic substrates that are commonly used to assay GGT. In human serum and in human tissues, there is a marked heterogeneity in GGT, but this heterogeneity can be attributed to different glycosylation of the same peptide rather than to the products of different genes.

CHROMOSOMAL LOCATION

Genetic locus: GGT1 (human) mapping to 22q11.23.

SOURCE

GGT1 (E-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 156-360 near the N-terminus of GGT1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

GGT1 (E-5) is available conjugated to agarose (sc-166908 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166908 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166908 PE), fluorescein (sc-166908 FITC), Alexa Fluor® 488 (sc-166908 AF488), Alexa Fluor® 546 (sc-166908 AF546), Alexa Fluor® 594 (sc-166908 AF594) or Alexa Fluor® 647 (sc-166908 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166908 AF680) or Alexa Fluor® 790 (sc-166908 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

GGT1 (E-5) is recommended for detection of GGT1 of human 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), 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).

Suitable for use as control antibody for GGT1 siRNA (h): sc-35473, GGT1 shRNA Plasmid (h): sc-35473-SH and GGT1 shRNA (h) Lentiviral Particles: sc-35473-V.

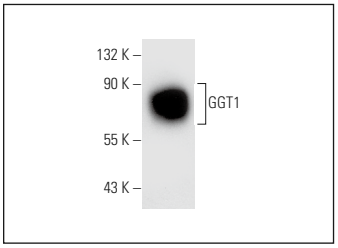
Molecular Weight of GGT1: 64 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

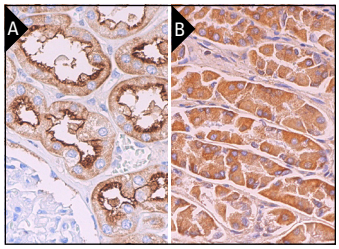
RECOMMENDED SUPPORT REAGENTS

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

DATA



GGT1 (E-5): sc-166908. Western blot analysis of GGT1 expression in Hep G2 whole cell lysate.



GGT1 (E-5): sc-166908. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing apical membrane and cytoplasmic staining of cells in tubules (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded upper stomach tissue showing cytoplasmic staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Wenzel, S.E., et al. 2017. PEBP1 wardens ferroptosis by enabling lipoxygenase generation of lipid death signals. Cell 171: 628-641.e26.
2. Bosch-Fortea, M., et al. 2019. Micropattern-based platform as a physiologically relevant model to study epithelial morphogenesis and nephrotoxicity. Biomaterials 218: 119339.
3. Takizawa, K., et al. 2022. Urinary extracellular vesicles signature for diagnosis of kidney disease. iScience 25: 105416.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.