

GGT5 (F-8): sc-373693

BACKGROUND

γ -glutamyltranspeptidase (GGT) 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 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.

REFERENCES

1. Bulle, F., et al. 1987. Assignment of the human γ -glutamyl transferase gene to the long arm of chromosome 22. *Hum. Genet.* 76: 283-286.
2. Heisterkamp, N., et al. 1991. Identification of a human γ -glutamyl cleaving enzyme related to, but distinct from, γ -glutamyl transpeptidase. *Proc. Natl. Acad. Sci. USA* 88: 6303-6307.
3. Visvikis, A., et al. 1991. High-level expression of enzymatically active mature human γ -glutamyltransferase in transgenic V79 Chinese hamster cells. *Proc. Natl. Acad. Sci. USA* 88: 7361-7365.
4. Heisterkamp, N., et al. 2008. The human γ -glutamyltransferase gene family. *Hum. Genet.* 123: 321-332.
5. Strasak, A.M., et al. 2008. Association of γ -glutamyltransferase and risk of cancer incidence in men: a prospective study. *Cancer Res.* 68: 3970-3977.

CHROMOSOMAL LOCATION

Genetic locus: GGT5 (human) mapping to 22q11.23.

SOURCE

GGT5 (F-8) is a mouse monoclonal antibody raised against amino acids 161-395 of GGT5 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ lambda light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

GGT5 (F-8) is available conjugated to agarose (sc-373693 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-373693 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-373693 PE), fluorescein (sc-373693 FITC), Alexa Fluor[®] 488 (sc-373693 AF488), Alexa Fluor[®] 546 (sc-373693 AF546), Alexa Fluor[®] 594 (sc-373693 AF594) or Alexa Fluor[®] 647 (sc-373693 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-373693 AF680) or Alexa Fluor[®] 790 (sc-373693 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

GGT5 (F-8) is recommended for detection of GGT5 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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).

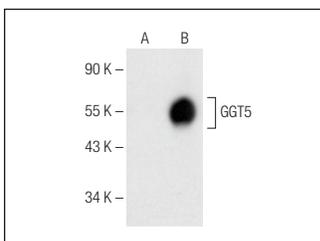
Suitable for use as control antibody for GGT5 siRNA (h): sc-40634, GGT5 shRNA Plasmid (h): sc-40634-SH and GGT5 shRNA (h) Lentiviral Particles: sc-40634-V.

Positive Controls: GGT5 (h2): 293 Lysate: sc-111022 or JAR cell lysate: sc-2276.

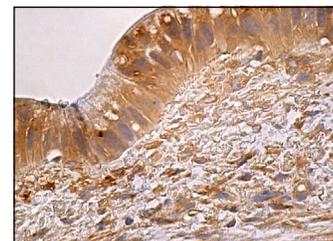
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG λ BP-HRP: sc-516132 or m-IgG λ BP-HRP (Cruz Marker): sc-516132-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-IgG λ BP-FITC: sc-516185 or m-IgG λ BP-PE: sc-516186 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG λ BP-HRP: sc-516132 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



GGT5 (F-8): sc-373693. Western blot analysis of GGT5 expression in non-transfected: sc-110760 (A) and human GGT5 transfected: sc-111022 (B) 293 whole cell lysates.



GGT5 (F-8): sc-373693. Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing cytoplasmic staining of glandular cells and fibroblasts.

SELECT PRODUCT CITATIONS

1. Luo, Z., et al. 2024. GGT5 facilitates migration and invasion through the induction of epithelial-mesenchymal transformation in gastric cancer. *BMC Med. Genomics* 17: 82.

STORAGE

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

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