

GGT5 (M-20): sc-19805

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.
6. Yavuz, B.B., et al. 2008. Serum elevated γ -glutamyltransferase levels may be a marker for oxidative stress in Alzheimer's disease. *Int. Psychogeriatr.* 20: 815-823.
7. Wannamethee, S.G., et al. 2008. The value of γ -glutamyltransferase in cardiovascular risk prediction in men without diagnosed cardiovascular disease or diabetes. *Atherosclerosis* 201: 168-175.

CHROMOSOMAL LOCATION

Genetic locus: Ggt5 (mouse) mapping to 10 C1.

SOURCE

GGT5 (M-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of GGT5 of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-19805 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

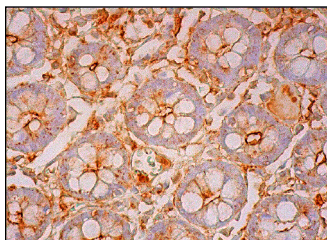
GGT5 (M-20) is recommended for detection of GGT5 light chain of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting 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 (m): sc-40635, GGT5 shRNA Plasmid (m): sc-40635-SH and GGT5 shRNA (m) Lentiviral Particles: sc-40635-V.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



GGT5 (M-20): sc-19805. Immunoperoxidase staining of formalin fixed, paraffin-embedded human colon tissue showing apical membrane staining of glandular cells and cytoplasmic staining of endothelial cells.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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