

MGST2 (M-59): sc-67213

BACKGROUND

MGST2 (microsomal glutathione S-transferase 2) is a 147 amino acid protein encoded by the human gene MGST2. MGST2 can catalyze the production of LTC₄ (leukotriene C₄) from LTA₄ (leukotriene A₄) and reduced glutathione. It can also catalyze the conjugation of 1-chloro-2,4-dinitrobenzene with reduced glutathione. MGST2 is a multi-pass membrane protein found as a homodimer. MGST2 belongs to the MAPEG family and is expressed in liver, spleen, skeletal muscle, heart, adrenals, pancreas, prostate, testis, fetal liver and fetal spleen. It has very low expression in lung, brain, placenta and bone marrow. Also, MGST2 is the only GST expressed in human umbilical vein endothelial cells (HUVECs).

REFERENCES

- Jakobsson, P.J., Mancini, J.A. and Ford-Hutchinson, A.W. 1996. Identification and characterization of a novel human microsomal glutathione S-transferase with leukotriene C₄ synthase activity and significant sequence identity to 5-lipoxygenase-activating protein and leukotriene C₄ synthase. *J. Biol. Chem.* 271: 22203-22210.
- Sjöström, M., Jakobsson, P.J., Heimburger, M., Palmblad, J. and Haeggström, J.Z. 2001. Human umbilical vein endothelial cells generate leukotriene C₄ via microsomal glutathione S-transferase type 2 and express the CysLT₁ receptor. *Eur. J. Biochem.* 268: 2578-2586.
- Schröder, O., Sjöström, M., Qiu, H., Jakobsson, P.J. and Haeggström, J.Z. 2004. Microsomal glutathione S-transferases: selective upregulation of leukotriene C₄ synthase during lipopolysaccharide-induced pyresis. *Cell. Mol. Life Sci.* 62: 87-94.
- Bresell, A., Weinander, R., Lundqvist, G., Raza, H., Shimoji, M., Sun, T.H., Balk, L., Wiklund, R., Eriksson, J., Jansson, C., Persson, B., Jakobsson, P.J. and Morgenstern, R. 2005. Bioinformatic and enzymatic characterization of the MAPEG superfamily. *FEBS J.* 272: 1688-1703.
- Veeriah, S., Kautenburger, T., Habermann, N., Sauer, J., Dietrich, H., Will, F. and Pool-Zobel, B.L. 2006. Apple flavonoids inhibit growth of HT29 human colon cancer cells and modulate expression of genes involved in the bio-transformation of xenobiotics. *Mol. Carcinog.* 45: 164-174.
- Yan, K.L., Zhang, X.J., Wang, Z.M., Yang, S., Zhang, G.L., Wang, J., Xiao, F.L., Gao, M., Cui, Y., Chen, J.J., Fan, X., Sun, L.D., Xia, Q., Zhang, K.Y., Niu, Z.M., Xu, S.J., Tzschach, A., Ropers, H., Huang, W. and Liu, J.J. 2006. A novel MGST2 non-synonymous mutation in a Chinese pedigree with psoriasis vulgaris. *J. Invest. Dermatol.* 126: 1003-1005.
- Yang, S., Yan, K.L., Zhang, X.J., Xiao, F.L., Fan, X., Gao, M., Cui, Y., Wang, P.G., Zhang, G.L., Sun, L.D., Wang, Z.M., Wang, D.Z., Zhang, K.Y., Huang, W. and Liu, J.J. 2006. Systematic evaluation of association between the microsomal glutathione S-transferase 2 common variation and psoriasis vulgaris in Chinese population. *Arch. Dermatol. Res.* 298: 107-112.

CHROMOSOMAL LOCATION

Genetic locus: MGST2 (human) mapping to 4q28.3; Mgst2 (mouse) mapping to 3 C.

SOURCE

MGST2 (M-59) is a rabbit polyclonal antibody raised against amino acids 51-109 mapping within an internal region of MGST2 of mouse origin.

PRODUCT

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

APPLICATIONS

MGST2 (M-59) is recommended for detection of MGST2 of mouse, rat and, to a lesser extent, human origin by Western Blotting (starting dilution 1:200, 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 MGST2 siRNA (h): sc-62610 and MGST2 siRNA (m): sc-62611.

Molecular Weight of MGST2: 16 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.