

GSTO1/2 (FL-241): sc-98560

BACKGROUND

GSTO1 (glutathione S-transferase omega 1), also known as p28 or GSTT1p28, is a 241 amino acid protein that localizes to the cytoplasm and contains both an N-terminal and a C-terminal GST domain. Expressed ubiquitously with highest expression in heart, liver and skeletal muscle, GSTO1 exists as a homodimer that functions as both a glutathione-dependent thiol transferase and a dehydroascorbate reductase. Specifically, GSTO1 catalyzes the reaction of glutathione with a wide variety of organic compounds to form thioethers, a process that is essential for the metabolism and detoxification of a variety of xenobiotics and carcinogens. Polymorphisms in the gene encoding GSTO1 may be associated with the development of childhood acute lymphoblastic leukemia, Parkinson's disease and Alzheimer disease. GSTO2 (glutathione S-transferase ω -2) is related to GSTO1 and is expressed in a variety of tissues throughout the body where it functions to catalyze the conversion of RX and glutathione to HX and R-S-glutathione.

REFERENCES

1. Ishikawa, T., et al. 1998. Molecular cloning and functional expression of rat liver glutathione-dependent dehydroascorbate reductase. *J. Biol. Chem.* 273: 28708-28712.
2. Kodym, R., et al. 1999. The cloning and characterization of a new stress response protein. A mammalian member of a family of t class glutathione s-transferase-like proteins. *J. Biol. Chem.* 274: 5131-5137.
3. Board, P.G., et al. 2000. Identification, characterization, and crystal structure of the ω class glutathione transferases. *J. Biol. Chem.* 275: 24798-24806.
4. Yin, Z.L., et al. 2001. Immuno-histochemistry of ω class glutathione S-transferase in human tissues. *J. Histochem. Cytochem.* 49: 983-987.
5. Li, Y.J., et al. 2003. Glutathione S-transferase ω -1 modifies age-at-onset of Alzheimer disease and Parkinson disease. *Hum. Mol. Genet.* 12: 3259-3267.
6. Whitbread, A.K., et al. 2003. Characterization of the human ω class glutathione transferase genes and associated polymorphisms. *Pharmacogenetics* 13: 131-144.

CHROMOSOMAL LOCATION

Genetic locus: GSTO1/GSTO2 (human) mapping to 10q25.1; Gsto1/Gsto2 (mouse) mapping to 19 D1.

SOURCE

GSTO1/2 (FL-241) is a rabbit polyclonal antibody raised against amino acids 1-241 representing full length GSTO1 of human origin.

PRODUCT

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

RESEARCH USE

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

APPLICATIONS

GSTO1/2 (FL-241) is recommended for detection of GSTO1 and GSTO2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

GSTO1/2 (FL-241) is also recommended for detection of GSTO1 and GSTO2 in additional species, including canine.

Molecular Weight of GSTO1: 31 kDa.

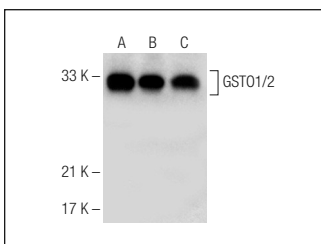
Molecular Weight of GSTO2: 28 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, DU 145 cell lysate: sc-2268 or HeLa whole cell lysate: sc-2200.

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.

DATA



GSTO1/2 (FL-241): sc-98560. Western blot analysis of GSTO1/2 expression in Hep G2 (A), DU 145 (B) and HeLa (C) whole cell lysates.

STORAGE

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



Try **GSTO1/2 (H-12): sc-166121** or **GSTO1/2 (D-12): sc-166040**, our highly recommended monoclonal alternatives to GSTO1/2 (FL-241).