

GSTO2 (S-11): sc-160421

BACKGROUND

GSTO2 (glutathione S-transferase omega-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. Composed of 243 amino acids, GSTO2 contains one GST C-terminal domain and a GST N-terminal domain. GSTO2 belongs to the GST superfamily and may be involved in catalyzing 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 asthma and urothelial carcinoma. The GSTO2 gene exists as four transcript variants encoding different alternatively spliced isoforms.

REFERENCES

1. Wang, Y.H., et al. 2009. A significantly joint effect between arsenic and occupational exposures and risk genotypes/diplotypes of CYP2E1, GSTO1 and GSTO2 on risk of urothelial carcinoma. *Toxicol. Appl. Pharmacol.* 241: 111-118.
2. Chariyalertsak, S., et al. 2009. Role of glutathione S-transferase omega gene polymorphisms in breast-cancer risk. *Tumori* 95: 739-743.
3. Piacentini, S., et al. 2010. Glutathione S-transferase gene polymorphisms and air pollution as interactive risk factors for asthma in a multicentre Italian field study: A preliminary study. *Ann. Hum. Biol.* 37: 427-439.
4. Andonova, I.E., et al. 2010. No evidence for glutathione S-transferases GSTA2, GSTM2, GSTO1, GSTO2, and GSTZ1 in breast cancer risk. *Breast Cancer Res. Treat.* 121: 497-502.
5. Polimanti, R., et al. 2010. GSTA1, GSTO1 and GSTO2 gene polymorphisms in Italian asthma patients. *Clin. Exp. Pharmacol. Physiol.* 37: 870-872.
6. Paiva, L., et al. 2010. Association between GSTO2 polymorphism and the urinary arsenic profile in copper industry workers. *Environ. Res.* 110: 463-468.

CHROMOSOMAL LOCATION

Genetic locus: *Gsto2* (mouse) mapping to 19 D1.

SOURCE

GSTO2 (S-11) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of GSTO2 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.

Blocking peptide available for competition studies, sc-160421 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

GSTO2 (S-11) is recommended for detection of GSTO2 of mouse and rat 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); non cross-reactive with GSTO1.

Suitable for use as control antibody for GSTO2 siRNA (m): sc-145816, GSTO2 shRNA Plasmid (m): sc-145816-SH and GSTO2 shRNA (m) Lentiviral Particles: sc-145816-V.

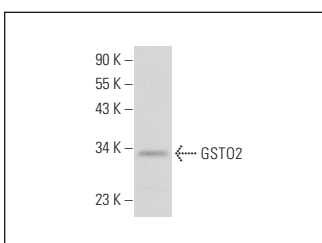
Molecular Weight of GSTO2: 28 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



GSTO2 (S-11): sc-160421. Western blot analysis of GSTO2 expression in NIH/3T3 whole cell lysate.

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.

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Try **GSTO1/2 (H-12): sc-166121**, our highly recommended monoclonal alternative to GSTO2 (S-11).