SZABO SCANDIC

Part of Europa Biosite

# Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!

## Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

## Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand


**SZABO-SCANDIC HandelsgmbH**

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

linkedin.com/company/szaboscandic

SANTA CRUZ BIOTECHNOLOGY, INC.

# Gsta1 siRNA (m): sc-44628

## BACKGROUND

Members of the glutathione S-transferase (GST) family of proteins function in the detoxification of xenobiotics to protect cells against toxicant-induced damage. GSTs are differentially expressed in lung, liver and kidney tissue. Three isoforms, Gsta1-1, Gsta1-4 and GSTM1, localize to the mitochondria in addition to the cytoplasm. In normal and transformed cells, the oncoprotein Myb transcriptionally upregulates GSTM1. This isoform shows high specific activity for aflatoxin B1 epoxide conjugation, suggesting an important role for this interaction in the defense against both chemical and oxidative stress. The C-terminal domain of Gsta1 may form a component of the hydrophobic substrate-binding site, but in contrast appears not to be directly involved in GSH binding and is not absolutely essential for catalytic activity.

## REFERENCES


1. Board, P.G., et al. 1991. The contribution of the C-terminal sequence to the catalytic activity of GST2, a human $\alpha$ class glutathione transferase. Biochem. J. 275: 171-174.
2. Sinning, I., et al. 1993. Structure determination and refinement of human $\alpha$ class glutathione transferase A1-1, and a comparison with the $\mu$ and $\pi$ class enzymes. J. Mol. Biol. 232: 192-212.
3. Cameron, A.D., et al. 1995. Structural analysis of human $\alpha$ class glutathione transferase A1-1 in the apo-form and in complexes with ethacrynic acid and its glutathione conjugate. Structure 3: 717-727.
4. McGuire, S., et al. 1997. Increased levels of glutathione S-transferases and appearance of novel $\alpha$ class isoenzymes in kidneys of mice exposed to mercuric chloride. I. Biochemical and immunohistochemical studies. Nephron 77: 452-460.
5. Massey, T.E., et al. 2000. Mechanisms of aflatoxin B1 lung tumorigenesis. Exp. Lung Res. 26: 673-683.
6. Raza, H., et al. 2002. Multiple isoforms of mitochondrial glutathione S-transferases and their differential induction under oxidative stress. Biochem. J. 366: 45-55.
7. Bartley, P.A., et al. 2003. Regulation of the gene encoding glutathione S-transferase M1 (GSTM1) by the Myb oncoprotein. Oncogene 22: 7570-7575.


## CHROMOSOMAL LOCATION

Genetic locus: Gsta1 (mouse) mapping to 9 E1.

## PRODUCT

Gsta1 siRNA (m) is a target-specific 19-25 nt siRNA designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Gsta1 shRNA Plasmid (m): sc-44628-SH and Gsta1 shRNA (m) Lentiviral Particles: sc-44628-V as alternate gene silencing products.

## RESEARCH USE

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

## STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

Gsta1 siRNA (m) is recommended for the inhibition of Gsta1 expression in mouse cells.

## SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

## GENE EXPRESSION MONITORING

GSTA1/2/5 (E-6): sc-398714 is recommended as a control antibody for monitoring of Gsta1 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG$\kappa$ BP-HRP: sc-516102 or m-IgG$\kappa$ BP-HRP (Cruz Marker): sc-516102-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) Immunofluorescence: use m-IgG$\kappa$ BP-FITC: sc-516140 or m-IgG$\kappa$ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Gsta1 gene expression knockdown using RT-PCR Primer: Gsta1 (m)-PR: sc-44628-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## PROTOCOLS

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