



# 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

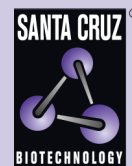
T. +43(0)1 489 3961-0

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

[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

[www.szabo-scandic.com](http://www.szabo-scandic.com)

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 



# GSTM4 siRNA (m): sc-145812

## BACKGROUND

Members of the glutathione S-transferase (GST) family of proteins function in the detoxification of xenobiotics to protect cells against toxicant-induced damage. There are eight families of GST proteins, namely  $\alpha$ ,  $\zeta$ ,  $\theta$ ,  $\kappa$ ,  $\mu$ ,  $\pi$ ,  $\sigma$  and  $\omega$ , each of which are composed of proteins that have a variety of functions throughout the cell. The GSTM proteins (GSTM1-GSTM5 in human and GSTM1-GSTM7 in mouse) are members of the  $\mu$  class of enzymes that conjugate with glutathione and function in the detoxification of carcinogens, environmental toxins and products of oxidative stress.

## REFERENCES

1. Taylor, J.B., Oliver, J., Sherrington, R. and Pemble, S.E. 1991. Structure of human glutathione S-transferase class  $\mu$  genes. *Biochem. J.* 274: 587-593.
2. Ross, V.L. and Board, P.G. 1993. Molecular cloning and heterologous expression of an alternatively spliced human  $\mu$  class glutathione S-transferase transcript. *Biochem. J.* 294: 373-380.
3. Ross, V.L., Board, P.G. and Webb, G.C. 1993. Chromosomal mapping of the human  $\mu$  class glutathione S-transferases to 1p13. *Genomics* 18: 87-91.
4. Comstock, K.E., Johnson, K.J., Rifkenberg, D. and Henner, W.D. 1993. Isolation and analysis of the gene and cDNA for a human  $\mu$  class glutathione S-transferase, GSTM4. *J. Biol. Chem.* 268: 16958-16965.
5. Liloglou, T., Walters, M., Maloney, P., Youngson, J. and Field, J.K. 2002. A T2517C polymorphism in the GSTM4 gene is associated with risk of developing lung cancer. *Lung Cancer* 37: 143-146.
6. Denson, J., Xi, Z., Wu, Y., Yang, W., Neale, G. and Zhang, J. 2006. Screening for inter-individual splicing differences in human GSTM4 and the discovery of a single nucleotide substitution related to the tandem skipping of two exons. *Gene* 379: 148-155.
7. Knight, T.R., Choudhuri, S. and Klaassen, C.D. 2007. Constitutive mRNA expression of various glutathione S-transferase isoforms in different tissues of mice. *Toxicol. Sci.* 100: 513-524.
8. Online Mendelian Inheritance in Man, OMIM™. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 138333. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

## CHROMOSOMAL LOCATION

Genetic locus: Gstm4 (mouse) mapping to 3 F2.3.

## PRODUCT

GSTM4 siRNA (m) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see GSTM4 shRNA Plasmid (m): sc-145812-SH and GSTM4 shRNA (m) Lentiviral Particles: sc-145812-V as alternate gene silencing products.

For independent verification of GSTM4 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-145812A, sc-145812B and sc-145812C.

## 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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

GSTM4 siRNA (m) is recommended for the inhibition of GSTM4 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  $\mu$ M in 66  $\mu$ l. 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.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor GSTM4 gene expression knockdown using RT-PCR Primer: GSTM4 (m)-PR: sc-145812-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.