



# 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) 

# VSTM3 siRNA (m): sc-144822

## BACKGROUND

VSTM3 (V-set and transmembrane domain-containing protein 3), also known as TIGIT (T cell immunoreceptor with Ig and ITIM domains) or VSIG9, is a 244 amino acid single-pass type I membrane protein that contains one Ig-like V-type domain and exists as multiple alternatively spliced isoforms. Expressed at low levels in NK cells and in peripheral memory and regulatory CD4<sup>+</sup> T cells, VSTM3 binds with high affinity to CD155 and, via this binding, causes an increase in the secretion of IL-10 and suppresses T cell activation by promoting the creation of mature dendritic cells. The gene encoding VSTM3 maps to human chromosome 3, which houses over 1,100 genes, including a chemokine receptor (CKR) gene cluster and a variety of human cancer-related gene loci.

## REFERENCES

1. Mellman, I. and Steinman, R.M. 2001. Dendritic cells: specialized and regulated antigen processing machines. *Cell* 106: 255-258.
2. Cant, C.A. and Ullrich, A. 2001. Signal regulation by family conspiracy. *Cell. Mol. Life Sci.* 58: 117-124.
3. Latour, S., Tanaka, H., Demeure, C., Mateo, V., Rubio, M., Brown, E.J., Maliszewski, C., Lindberg, F.P., Oldenborg, A., Ullrich, A., Delespesse, G. and Sarfati, M. 2001. Bidirectional negative regulation of human T and dendritic cells by CD47 and its cognate receptor signal-regulator protein- $\alpha$ : down-regulation of IL-12 responsiveness and inhibition of dendritic cell activation. *J. Immunol.* 167: 2547-2554.
4. Braun, D., Galibert, L., Nakajima, T., Saito, H., Quang, V.V., Rubio, M. and Sarfati, M. 2006. Semimature stage: a checkpoint in a dendritic cell maturation program that allows for functional reversion after signal-regulatory protein- $\alpha$  ligation and maturation signals. *J. Immunol.* 177: 8550-8559.
5. Yu, X., Harden, K., Gonzalez, L.C., Francesco, M., Chiang, E., Irving, B., Tom, I., Ivelja, S., Refino, C.J., Clark, H., Eaton, D. and Grogan, J.L. 2009. The surface protein TIGIT suppresses T cell activation by promoting the generation of mature immunoregulatory dendritic cells. *Nat. Immunol.* 10: 48-57.

## CHROMOSOMAL LOCATION

Genetic locus: Tigit (mouse) mapping to 16 B4.

## PRODUCT

VSTM3 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see VSTM3 shRNA Plasmid (m): sc-144822-SH and VSTM3 shRNA (m) Lentiviral Particles: sc-144822-V as alternate gene silencing products.

## 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) or our catalog for detailed protocols and support products.

## 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

VSTM3 siRNA (m) is recommended for the inhibition of VSTM3 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 VSTM3 gene expression knockdown using RT-PCR Primer: VSTM3 (m)-PR: sc-144822-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.