



# 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) 

# ZnT-6 siRNA (m): sc-155821

## BACKGROUND

Zinc, an essential element required for cell proliferation and differentiation, plays a role in a diverse array of cellular functions (such as neuroregulation) and acts as a cofactor for numerous enzymes and transcription factors. The zinc transporter (ZnT) family regulates the supply of zinc within cells, and its members commonly contain six membrane-spanning domains, a large histidine-rich intracellular loop and a C-terminal tail. ZnT-6 (zinc transporter 6), also known as SLC30A6 (solute carrier family 30 member 6), is a 461 amino acid gene product that localizes to the membrane of the *trans*-Golgi network. Expressed throughout the body with highest expression in brain, eye and lung, ZnT-6 functions as zinc transporter that regulates zinc homeostasis within vesicular compartments and the Golgi apparatus and may help to form Insulin crystals within pancreatic  $\beta$  cells. ZnT-6 is expressed as three isoforms due to alternative splicing events and its expression is upregulated in response to zinc depletion.

## REFERENCES

- Huang, L., Kirschke, C.P. and Gitschier, J. 2002. Functional characterization of a novel mammalian zinc transporter, ZnT6. *J. Biol. Chem.* 277: 26389-26395.
- Lovell, M.A., Smith, J.L. and Markesbery, W.R. 2006. Elevated zinc transporter-6 in mild cognitive impairment, Alzheimer disease, and pick disease. *J. Neuropathol. Exp. Neurol.* 65: 489-498.
- Albrecht, A.L., Somji, S., Sens, M.A., Sens, D.A. and Garrett, S.H. 2008. Zinc transporter mRNA expression in the RWPE-1 human prostate epithelial cell line. *Biomaterials* 21: 405-416.
- Lyubartseva, G., Smith, J.L., Markesbery, W.R. and Lovell, M.A. 2009. Alterations of zinc transporter proteins ZnT-1, ZnT-4 and ZnT-6 in preclinical Alzheimer's disease Brain. *Brain Pathol.* 20: 343-350.
- Kehl-Fie, T.E. and Skaar, E.P. 2009. Nutritional immunity beyond iron: a role for manganese and zinc. *Curr. Opin. Chem. Biol.* 14: 218-224.
- Fukunaka, A., Suzuki, T., Kurokawa, Y., Yamazaki, T., Fujiwara, N., Ishihara, K., Migaki, H., Okumura, K., Masuda, S., Yamaguchi-Iwai, Y., Nagao, M. and Kambe, T. 2009. Demonstration and characterization of the heterodimerization of ZnT5 and ZnT6 in the early secretory pathway. *J. Biol. Chem.* 284: 30798-30806.
- Wang, X. and Zhou, B. 2010. Dietary zinc absorption: A play of Zips and ZnTs in the gut. *IUBMB Life* 62: 176-182.
- Fukunaka, A. and Kambe, T. 2010. Mechanism of zinc transport by zinc transporters, ZnT and ZIP. *Seikagaku* 82: 30-34.

## CHROMOSOMAL LOCATION

Genetic locus: Slc30a6 (mouse) mapping to 17 E2.

## PROTOCOLS

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

## PRODUCT

ZnT-6 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 ZnT-6 shRNA Plasmid (m): sc-155821-SH and ZnT-6 shRNA (m) Lentiviral Particles: sc-155821-V as alternate gene silencing products.

For independent verification of ZnT-6 (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-155821A, sc-155821B and sc-155821C.

## 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

ZnT-6 siRNA (m) is recommended for the inhibition of ZnT-6 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 ZnT-6 gene expression knockdown using RT-PCR Primer: ZnT-6 (m)-PR: sc-155821-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.