

# 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

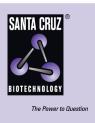
- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien T. +43(0)1 489 3961-0 F. +43(0)1 489 3961-7 <u>mail@szabo-scandic.com</u> www.szabo-scandic.com

#### SANTA CRUZ BIOTECHNOLOGY, INC.

## Tescalcin siRNA (m): sc-154194



#### BACKGROUND

The EF-hand domain is a 12 amino acid loop motif that is commonly found in proteins that participate in calcium-binding events within the cell. EF-hand domains generally exist in a pair that, together, form a stable four-helix bundle that enables the binding of calcium ions. Tescalcin, also known as TESC, TSC or CHP3, is a 267 amino acid protein that contains one EF-hand domain and is expressed abundantly in adult heart tissue. Using calcium as a cofactor, Tescalcin interacts with NHE-1 and functions to couple the activation of the ERK cascade with the expression of Ets proteins during megakaryocytic differentiation. Human Tescalcin shares 97% sequence identity with its mouse counterpart, suggesting a conserved role between species. Multiple isoforms of Tescalcin exist due to alternative splicing events.

#### REFERENCES

- Perera, E.M., Martin, H., Seeherunvong, T., Kos, L., Hughes, I.A., Hawkins, J.R. and Berkovitz, G.D. 2001. Tescalcin, a novel gene encoding a putative EF-hand Ca<sup>2+</sup>-binding protein, Col9a3, and renin are expressed in the mouse testis during the early stages of gonadal differentiation. Endocrinology 142: 455-463.
- Mailänder, J., Müller-Esterl, W. and Dedio, J. 2001. Human homolog of mouse tescalcin associates with Na<sup>+</sup>/H<sup>+</sup> exchanger type-1. FEBS Lett. 507: 331-335.
- 3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 611585. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- Li, X., Liu, Y., Kay, C.M., Müller-Esterl, W. and Fliegel, L. 2003. The Na+/H+ exchanger cytoplasmic tail: structure, function, and interactions with tescalcin. Biochemistry 42: 7448-7456.
- Gutierrez-Ford, C., Levay, K., Gomes, A.V., Perera, E.M., Som, T., Kim, Y.M., Benovic, J.L., Berkovitz, G.D. and Slepak, V.Z. 2003. Characterization of tescalcin, a novel EF-hand protein with a single Ca<sup>2+</sup>-binding site: metalbinding properties, localization in tissues and cells, and effect on calcineurin. Biochemistry 42: 14553-14565.
- Malo, M.E. and Fliegel, L. 2006. Physiological role and regulation of the Na<sup>+</sup>/H<sup>+</sup> exchanger. Can. J. Physiol. Pharmacol. 84: 1081-1095.
- Levay, K. and Slepak, V.Z. 2007. Tescalcin is an essential factor in megakaryocytic differentiation associated with Ets family gene expression. J. Clin. Invest. 117: 2672-2683.

#### CHROMOSOMAL LOCATION

Genetic locus: Tesc (mouse) mapping to 5 F.

#### PRODUCT

Tescalcin 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 Tescalcin shRNA Plasmid (m): sc-154194-SH and Tescalcin shRNA (m) Lentiviral Particles: sc-154194-V as alternate gene silencing 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**

Tescalcin siRNA (m) is recommended for the inhibition of Tescalcin 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 Tescalcin gene expression knockdown using RT-PCR Primer: Tescalcin (m)-PR: sc-154194-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 for detailed protocols and support products.