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.

# ET-1 siRNA (m): sc-45395

## BACKGROUND

The human endothelins represent a gene family comprised of endothelin-1, endothelin-2, and endothelin-3, also known as ET-1, ET-2, and ET-3. Endothelins can affect the central nervous system and neuronal excitability, and they elicit potent vasoconstrictor action. The two receptor subtypes responsible for inducing vasoconstriction and vasodilation, ETA and ETB, have different receptor affinities for ET-1, ET-2, and ET-3. Of the three isopeptides, ET-2 has the most potent vasoconstrictor activity. Biologically active ETs are proteolytically generated from a larger precursor, the big-endothelin, by action of the endothelin-converting enzyme (ECE) family. ET-1 is a potent, 21-amino acid vasoconstrictor peptide produced by vascular endothelial cells. The ET-2 cDNA is 1.3 kb in length and encodes a proprotein consisting of 178 amino acid residues. ET3 mRNA encodes a 230-amino acid precursor that includes ET3 and a 15-amino acid homologous segment called the ET3-like sequence.

## REFERENCES


1. Itoh, Y., et al. 1988. Cloning and sequence analysis of cDNA encoding the precursor of a human endothelium-derived vasoconstrictor peptide, endothelin: identity of human and porcine endothelin. FEBS Lett. 231: 440-444.
2. Masaki, T. 1989. The discovery, the present state, and the future prospects of endothelin. J. Cardiovasc. Pharmacol. 13: S1-S4, S18.
3. Watanabe, T., et al. 1989. Positive inotropic and vasoconstrictive effects of endothelin-1 in *in vivo* and *in vitro* experiments: characteristics and the role of L-type calcium channels. J. Cardiovasc. Pharmacol. 13: S108-S111, S123.
4. Godfraind, T., et al. 1989. Effect of endothelin-1 on calcium channel gating by agonists in vascular smooth muscle. J. Cardiovasc. Pharmacol. 13: S112-S117, S123.
5. Inoue, A., et al. 1989. The human preproendothelin-1 gene. Complete nucleotide sequence and regulation of expression. J. Biol. Chem. 264: 14954-14959.
6. Arinami, T., et al. 1991. Chromosomal assignments of the human endothelin family genes: the endothelin-1 gene (EDN1) to 6p23-p24, the endothelin-2 gene (EDN2) to 1p34, and the endothelin-3 gene (EDN3) to 20q13.2-q13.3. Am. J. Hum. Genet. 48: 990-996.
7. Nguyen, B.N. and Johnson, J.A. 1998. The role of endothelin in heart failure and hypertension. Pharmacotherapy 18: 706-719.
8. Giannessi, D., et al. 2001. The role of endothelins and their receptors in heart failure. Pharmacol. Res. 43: 111-126.
9. Romanelli, R.G., et al. 2005. Role of endothelin-1 in the migration of human olfactory gonadotropin-releasing hormone-secreting neuroblasts. Endocrinology 146: 4321-4330.


## CHROMOSOMAL LOCATION

Genetic locus: Edn1 (mouse) mapping to 13 A4.

## PROTOCOLS

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

## PRODUCT

ET-1 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see ET-1 shRNA Plasmid (m): sc-45395-SH and ET-1 shRNA (m) Lentiviral Particles: sc-45395-V as alternate gene silencing products.

For independent verification of ET-1 (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-45395A, sc-45395B and sc-45395C.

## 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

ET-1 siRNA (m) is recommended for the inhibition of ET-1 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.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor ET-1 gene expression knockdown using RT-PCR Primer: ET-1 (m)-PR: sc-45395-PR (20 µl, 470 bp). 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.