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.

NHEDC2 siRNA (m): sc-149960

BACKGROUND

Na^+/H^+ exchangers (NHEs) catalyze the transport of Na^+ in exchange for H^+ across membranes in organisms and are required for numerous physiological processes. NHEDC2 (Na^+/H^+ exchanger-like domain-containing protein 2), also known as NHA2, is a 537 amino acid mitochondrial protein. NHEDC2 is involved in organelle volume homeostasis by catalyzing the exchange of protons for Na^+ and Li^+ across the inner mitochondrial membrane. Found in red blood cells, NHEDC2 is required for bone resorption activity and osteoclast differentiation. As a multi-pass membrane protein, NHEDC2 is expressed as two isoforms produced by alternative splicing events.

REFERENCES

1. Bianchini, L. and Poussegur, J. 1994. Molecular structure and regulation of vertebrate Na^+/H^+ exchangers. J. Exp. Biol. 196: 337-345.
2. Noël, J. and Pouyssegur, J. 1995. Hormonal regulation, pharmacology, and membrane sorting of vertebrate Na^+/H^+ exchanger isoforms. Am. J. Physiol. 268: C283-C296.
3. Yun, C.H., Tse, C.M., Nath, S.K., Levine, S.A., Brant, S.R. and Donowitz, M. 1995. Mammalian Na^+/H^+ exchanger gene family: structure and function studies. Am. J. Physiol. 269: G1-G11.
4. Ritter, M., Fuerst, J., Wöll, E., Chwatal, S., Gschwentner, M., Lang, F., Deetjen, P. and Paulmichl, M. 2001. Na^+/H^+ exchangers: linking osmotic dysequilibrium to modified cell function. Cell. Physiol. Biochem. 11: 1-18.
5. Xiang, M., Feng, M., Muend, S. and Rao, R. 2007. A human Na^+/H^+ antiporter sharing evolutionary origins with bacterial NhaA may be a candidate gene for essential hypertension. Proc. Natl. Acad. Sci. USA 104: 18677-18681.
6. Battaglino, R.A., Pham, L., Morse, L.R., Vokes, M., Sharma, A., Odgren, P.R., Yang, M., Sasaki, H. and Stashenko, P. 2008. NHA-oc/NHA2: a mitochondrial cation-proton antiporter selectively expressed in osteoclasts. Bone 42: 180-192.
7. Fuster, D.G., Zhang, J., Shi, M., Bobulescu, I.A., Andersson, S. and Moe, O.W. 2008. Characterization of the sodium/hydrogen exchanger NHA2. J. Am. Soc. Nephrol. 19: 1547-1556.
8. Online Mendelian Inheritance in Man, OMIM™. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 611789. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: Nhedc2 (mouse) mapping to 3 G3.

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.

PRODUCT

NHEDC2 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 NHEDC2 shRNA Plasmid (m): sc-149960-SH and NHEDC2 shRNA (m) Lentiviral Particles: sc-149960-V as alternate gene silencing products.

For independent verification of NHEDC2 (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-149960A, sc-149960B and sc-149960C.

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

NHEDC2 siRNA (m) is recommended for the inhibition of NHEDC2 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 NHEDC2 gene expression knockdown using RT-PCR Primer: NHEDC2 (m)-PR: sc-149960-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.