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.

neuroglobin siRNA (h): sc-42081

BACKGROUND

Globins are a superfamily of gas-binding heme proteins that are present in bacteria, protists, fungi, plants and animals. Globins play evolutionarily divergent roles which include binding, transport, scavenging, detoxification and sensing of oxygen, nitric oxide and carbon monoxide. Neuroglobin (Ngb) is a hexacoordinate hemoglobin that is predominantly expressed in the vertebrate brain and may enhance oxygen supply to neural components. Neuroglobin displays a high affinity for oxygen and its presence in cerebral neurons suggests a role in neuronal responses to hypoxia or ischemia. For example, *in vitro* neuronal hypoxia causes an elevation in the levels of neuroglobin, which enhances neuronal cell survival. The human neuroglobin gene maps to chromosome 14q24.3 and encodes a 151 amino acid protein.

REFERENCES

1. Burmester, T., et al. 2000. A vertebrate globin expressed in the brain. Nature 407: 520-523.
2. Online Mendelian Inheritance in Man, OMIM™. 2000. Johns Hopkins University, Baltimore, MD. MIM Number: 605304. World Wide Web URL: http://www.ncbi.nlm.nih. gov/omim/
3. Sun, Y., et al. 2001. Neuroglobin is upregulated by and protects neurons from hypoxic-ischemic injury. Proc. Natl. Acad. Sci. USA 98: 15306-15311.
4. Trent, J.T., 3rd., et al. 2001. Human neuroglobin, a hexacoordinate hemoglobin that reversibly binds oxygen. J. Biol. Chem. 276: 30106-30110.
5. Couture, M., et al. 2001. The heme environment of mouse neuroglobin. Evidence for the presence of two conformations of the heme pocket. J. Biol. Chem. 276: 36377-36382.
6. Zhang, C.G., et al. 2001. Coding region cDNA sequence cloning of rat neuroglobin gene, its polymorphism feature and tissue expression profile analysis. Yi Chuan Xue Bao 28: 997-1001.
7. Sun, Y., et al. 2001. Neuroglobin is up-regulated by and protects neurons from hypoxic-ischemic injury. Proc. Natl. Acad. Sci. USA 98: 15306-15311.
8. Burmester, T., et al. 2002. Cytoglobin: a novel globin type ubiquitously expressed in vertebrate tissues. Mol. Biol. Evol. 19: 416-421.

CHROMOSOMAL LOCATION

Genetic locus: NGB (human) mapping to 14q24.3.

PRODUCT

neuroglobin siRNA (h) 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 neuroglobin shRNA Plasmid (h): sc-42081-SH and neuroglobin shRNA (h) Lentiviral Particles: sc-42081-V as alternate gene silencing products.

For independent verification of neuroglobin (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-42081A, sc-42081B and sc-42081C.

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

neuroglobin siRNA (h) is recommended for the inhibition of neuroglobin expression in human 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.

GENE EXPRESSION MONITORING

neuroglobin (G-11): sc-133086 is recommended as a control antibody for monitoring of neuroglobin gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor neuroglobin gene expression knockdown using RT-PCR Primer: neuroglobin (h)-PR: sc-42081-PR (20 µl, 508 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.

PROTOCOLS

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