



NXF3 siRNA (m): sc-150131

BACKGROUND

Nuclear export factor (NXF) proteins belong to an evolutionarily conserved family of proteins which are characterized by a leucine-rich-repeat domain (LRR) followed by a region known as the Nuclear Transport Factor 2 (NTF2)-like domain. The NXF family includes TAP1 (NXF1) and NXF2-5. TAP1 mediates the export of constitutive transport element (CTE)-containing simian type D retroviral RNAs through direct binding to the CTE. NXF2 binds RNA and localizes to the nuclear envelope, where it exhibits RNA export activity. NXF3 does not bind RNA nor localize to the nuclear rim, and NXF3 does not exhibit RNA export activity. NXF5 binds RNA and localizes in the form of granules in the cell body and neurites of mature hippocampal neurons. TAP1, NXF2 and NXF5 form heterodimers with RNA nuclear export-associated protein p15 (NXT). The human NXF gene cluster maps to Xcen-NXF5-NXF2-NXF4-NXF3-Xqter.

REFERENCES

1. Herold, A., et al. 2000. TAP (NXF1) belongs to a multigene family of putative RNA export factors with a conserved modular architecture. *Mol. Cell. Biol.* 20: 8996-9008.
2. Tan, W., et al. 2000. The mRNA export in *Caenorhabditis elegans* is mediated by Ce-NXF-1, an ortholog of human TAP/NXF and *Saccharomyces cerevisiae* Mex67p. *RNA* 6: 1762-1772.
3. Nappi, F., et al. 2001. Identification of a novel posttranscriptional regulatory element by using a REV- and RRE-mutated human immunodeficiency virus type 1 DNA proviral clone as a molecular trap. *J. Virol.* 75: 4558-4569.
4. Braun, I.C., et al. 2001. Overexpression of TAP/p15 heterodimers bypasses nuclear retention and stimulates nuclear mRNA export. *J. Biol. Chem.* 276: 20536-20543.
5. Jun, L., et al. 2001. NXF5, a novel member of the nuclear RNA export factor family, is lost in a male patient with a syndromic form of mental retardation. *Curr. Biol.* 11: 1381-1391.

CHROMOSOMAL LOCATION

Genetic locus: Nxf3 (mouse) mapping to X F1.

PRODUCT

NXF3 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see NXF3 shRNA Plasmid (m): sc-150131-SH and NXF3 shRNA (m) Lentiviral Particles: sc-150131-V as alternate gene silencing products.

For independent verification of NXF3 (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-150131A, sc-150131B and sc-150131C.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support 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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

NXF3 siRNA (m) is recommended for the inhibition of NXF3 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 μ M in 66 μ 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 NXF3 gene expression knockdown using RT-PCR Primer: NXF3 (m)-PR: sc-150131-PR (20 μ 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.