

TAP siRNA (h): sc-38142

BACKGROUND

The constitutive transport element (CTE) of type D retroviruses serves as a signal of nuclear export for unspliced viral RNAs. TAP (also known as NXF1) mediates the export of CTE-containing simian type D retroviral RNAs through binding directly to the CTE. TAP is associated with a recognized mRNA export pathway and is a member of the multigene family of NXF proteins. 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.

REFERENCES

1. 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.
2. 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.
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. Zolotukhin, A.S., et al. 2001. Retroviral constitutive transport element evolved from cellular tap(NXF1)-binding sequences. J. Virol. 75: 5567-5575.
5. 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.

CHROMOSOMAL LOCATION

Genetic locus: NXF1 (human) mapping to 11q12.3.

PRODUCT

TAP 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see TAP shRNA Plasmid (h): sc-38142-SH and TAP shRNA (h) Lentiviral Particles: sc-38142-V as alternate gene silencing products.

For independent verification of TAP (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-38142A, sc-38142B and sc-38142C.

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

TAP siRNA (h) is recommended for the inhibition of TAP 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 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.

GENE EXPRESSION MONITORING

TAP (53H8): sc-32319 is recommended as a control antibody for monitoring of TAP 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-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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 TAP gene expression knockdown using RT-PCR Primer: TAP (h)-PR: sc-38142-PR (20 μ l, 564 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.