

Abin-1 siRNA (m): sc-140779

BACKGROUND

Abin-1, also known as TNIP1 (TNFAIP3 interacting protein 1), VAN or NAF1 (nef-associated factor 1), is a 636 amino acid protein that localizes to both the nucleus and the cytoplasm and is shuttled between the two intercellular regions in a CRM1-dependent manner. Expressed ubiquitously with highest expression in spleen and skeletal muscle, Abin-1 interacts with A20 and, via this interaction, interferes with TRAF2-mediated transactivation signals and effectively inhibits TNF-induced NF κ B expression. Additionally, Abin-1 can be incorporated into HIV-1 virions and, if overexpressed, can inhibit viral replication. Abin-1 may also play an important role in the regulation of nuclear import and export activities. Multiple isoforms of Abin-1 exist due to alternative splicing events.

REFERENCES

1. Fukushi, M., et al. 1999. Identification and cloning of a novel cellular protein NAF1, Nef-associated factor 1, that increases cell surface CD4 expression. *FEBS Lett.* 442: 83-88.
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3. Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607714. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Favre, M., et al. 2003. High frequency of alternative splicing of human genes participating in the HIV-1 life cycle: a model using tsg 101, β TrCP, PPIA, Ini1, NAF1, and PML. *J. Acquir. Immune Defic. Syndr.* 34: 127-133.
5. Shiote, Y., et al. 2006. Multiple splicing variants of NAF1/Abin-1 transcripts and their alterations in hematopoietic tumors. *Int. J. Mol. Med.* 18: 917-923.
6. Mauro, C., et al. 2006. Abin-1 binds to nemo/IKK γ and co-operates with A20 in inhibiting NF κ B. *J. Biol. Chem.* 281: 18482-18488.

CHROMOSOMAL LOCATION

Genetic locus: Tnfp1 (mouse) mapping to 11 B1.3.

PRODUCT

Abin-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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Abin-1 shRNA Plasmid (m): sc-140779-SH and Abin-1 shRNA (m) Lentiviral Particles: sc-140779-V as alternate gene silencing products.

For independent verification of Abin-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-140779A, sc-140779B and sc-140779C.

PROTOCOLS

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

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20 $^{\circ}$ C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20 $^{\circ}$ 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

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

Abin-1 (G-12): sc-376999 is recommended as a control antibody for monitoring of Abin-1 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 Abin-1 gene expression knockdown using RT-PCR Primer: Abin-1 (m)-PR: sc-140779-PR (20 μ l). Annealing temperature for the primers should be 55-60 $^{\circ}$ C and the extension temperature should be 68-72 $^{\circ}$ C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.