SANTA CRUZ BIOTECHNOLOGY, INC.

Abin-1 siRNA (h): sc-92019

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 NFκB 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.
2. Zhang, S., et al. 2002. A new ERK2 binding protein, NAF1, attenuates the EGF/ERK 2 nuclear signaling. Biochem. Biophys. Res. Commun. 297: 17-23.
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, βTrCP, 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.

CHROMOSOMAL LOCATION

Genetic locus: TNIP1 (human) mapping to 5q33.1.

PRODUCT

Abin-1 siRNA (h) is a target-specific 19-25 nt siRNA 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 Abin-1 shRNA Plasmid (h): sc-92019-SH and Abin-1 shRNA (h) Lentiviral Particles: sc-92019-V as alternate gene silencing 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 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

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

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-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 Abin-1 gene expression knockdown using RT-PCR Primer: Abin-1 (h)-PR: sc-92019-PR (20 µl, 555 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Khanolkar, R.C., et al. 2016. Leukocyte Ig-like receptor B1 restrains dendritic cell function through increased expression of the NFκB regulator ABIN1/TNIP1. J. Leukoc. Biol. 100: 737-746.

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.