SANTA CRUZ BIOTECHNOLOGY, INC.

Abin-3 siRNA (m): sc-72419

BACKGROUND

The nuclear factor NFκB is essential for the regulation of immune response genes, inflammatory processes and apoptosis. Abin-3 (A20-binding inhibitor of NFκB activation 3), also known as Listeria-induced gene protein or TNFAIP3-interacting protein 3 (TNIP3), is a 319 amino acid protein that negatively regulates NFκB activation in response to TNF and LPS. Through its interaction with A20, Abin-3 interferes with TRAF2-mediated transactivation signals and effectively inhibits TNF-induced NFκB expression. Abin-3 is highly expressed in thymus, lymph node, lung and fetal liver, with lower expresion levels in spleen, brain, tonsils and leukocytes. Abin-3 has been found to be induced by Listeria infection and can be slightly downregulated by dexamethasone.

REFERENCES

1. Staege, H., et al. 2001. Two novel genes FIND and LIND differentially expressed in deactivated and Listeria-infected human macrophages. Immunogenetics 53: 105-113.
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3. Bouwmeester, T., et al. 2004. A physical and functional map of the human TNFα/NFκB signal transduction pathway. Nat. Cell Biol. 6: 97-105.
4. Wullaert, A., et al. 2007. LIND/Abin-3 is a novel lipopolysaccharide-inducible inhibitor of NFκB activation. J. Biol. Chem. 282: 81-90.
5. Weaver, B.K., et al. 2007. Abin-3: a molecular basis for species divergence in interleukin-10-induced anti-inflammatory actions. Mol. Cell. Biol. 27: 4603-4616.
6. Verstrepen, L., et al. 2008. Expression of the NFκB inhibitor Abin-3 in response to TNF and Toll-like receptor 4 stimulation is itself regulated by NFκB. J. Cell. Mol. Med. 12: 316-329.
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CHROMOSOMAL LOCATION

Genetic locus: Tnip3 (mouse) mapping to 6 C1.

PRODUCT

Abin-3 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Abin-3 shRNA Plasmid (m): sc-72419-SH and Abin-3 shRNA (m) Lentiviral Particles: sc-72419-V as alternate gene silencing products.

For independent verification of Abin-3 (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-72419A, sc-72419B and sc-72419C.

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-3 siRNA (m) is recommended for the inhibition of Abin-3 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 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Abin-3 gene expression knockdown using RT-PCR Primer: Abin-3 (m)-PR: sc-72419-PR (20 µl). 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.