SANTA CRUZ BIOTECHNOLOGY, INC.

TRIAD3 siRNA (h): sc-76730

BACKGROUND

TRIAD protein family members typically contain a double RING finger-linked (DRIL) domain, which consists of two RING fingers flanked by a conserved cysteine-rich zinc-binding region, allowing them to interact with several other proteins. TRIAD3 (Triad domain-containing protein 3), also known as E3 ubiquitin-protein ligase RNF216 or Zinc finger protein inhibiting NFκB (ZIN), is a 866 amino acid cytoplasmic protein that acts as a E3 ubiquitin-protein ligase and enhances ubiquination, and therefore degradation, of TLR4 and TLR9. This evidence suggests that TRIAD3 may regulate the duration and intensity of Toll-like receptor signaling. TRIAD3, which is highly expressed in testis and peripheral blood lymphocytes, also inhibits IL-1 and TNF-induced NFκB activation pathways and promotes RIP and TNF-mediated apoptosis. There are three isoforms of TRIAD3 that exist as a result of alternative splicing events.

REFERENCES

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2. Chen, D., et al. 2002. A novel zinc finger protein interacts with receptor-interacting protein (RIP) and inhibits tumor necrosis factor (TNF)- and IL1-induced NFκB activation. J. Biol. Chem. 277: 15985-15991.
3. Feng, F., et al. 2004. Ring finger protein ZIN interacts with human immunodeficiency virus type 1 Vif. J. Virol. 78: 10574-10581.
4. Chuang, T.H. and Ulevitch, R.J. 2004. Triad3A, an E3 ubiquitin-protein ligase regulating Toll-like receptors. Nat. Immunol. 5: 495-502.
5. Fearns, C., et al. 2006. Triad3A regulates ubiquitination and proteasomal degradation of RIP1 following disruption of Hsp90 binding. J. Biol. Chem. 281: 34592-34600.
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7. Bibeau-Poirier, A. and Servant, M.J. 2008. Roles of ubiquitination in pattern-recognition receptors and type I interferon receptor signaling. Cytokine 43: 359-367.

CHROMOSOMAL LOCATION

Genetic locus: RNF216 (human) mapping to 7p22.1.

PRODUCT

TRIAD3 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see TRIAD3 shRNA Plasmid (h): sc-76730-SH and TRIAD3 shRNA (h) Lentiviral Particles: sc-76730-V as alternate gene silencing products.

For independent verification of TRIAD3 (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-76730A, sc-76730B and sc-76730C.

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

TRIAD3 siRNA (h) is recommended for the inhibition of TRIAD3 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor TRIAD3 gene expression knockdown using RT-PCR Primer: TRIAD3 (h)-PR: sc-76730-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.