SANTA CRUZ BIOTECHNOLOGY, INC.

NALP4 siRNA (h): sc-61144

BACKGROUND

NALPs are a subfamily of cytoplasmic proteins within the larger family of CATERPILLER proteins. Most short NALPs, such as NALP4 (PAN2, PYPAF4), have an N-terminal pyrin (MEFV) domain (PYD), followed by a NACHT domain, a NACHT-associated domain (NAD) and a C-terminal leucine-rich repeat (LRR) region. Long NALPs, such as NALP1, also have C-terminal extensions containing caspase recruitment domains (CARDs) and function to find domains (FIINDs). NALPs are putative agents in the activation of proinflammatory caspases (e.g. CASP1) through their association with multiprotein complexes called inflammasomes. NALP4 demonstrates predominant expression in spleen tissue, followed by placenta, lung, liver, kidney, pancreas and thymus tissues.

REFERENCES

1. Moricca, G., Arcuri, E. and Moricca, P. 1981. Neuroadenolysis of the pituitary. Acta Anaesthesiol. Belg. 32: 87-99.
2. Fiorentino, L., Stehlik, C., Oliveira, V., Ariza, M.E., Godzik, A. and Reed, J.C. 2002. A novel PAAD-containing protein that modulates NFκB induction by cytokines tumor necrosis factor α and interleukin-1β. J. Biol. Chem. 277: 35333-35340.
3. Drygin, D., Koo, S., Perera, R., Barone, S. and Bennett, C.F. 2005. Induction of toll-like receptors and NALP/PAN/PYPAF family members by modified oligonucleotides in lung epithelial carcinoma cells. Oligonucleotides 15: 105-118.

CHROMOSOMAL LOCATION

Genetic locus: NALP4 (human) mapping to 19q13.43.

PRODUCT

NALP4 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 NALP4 shRNA Plasmid (h): sc-61144-SH and NALP4 shRNA (h) Lentiviral Particles: sc-61144-V as alternate gene silencing products.

For independent verification of NALP4 (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-61144A, sc-61144B and sc-61144C.

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.

RESEARCH USE

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

APPLICATIONS

NALP4 siRNA (h) is recommended for the inhibition of NALP4 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 NALP4 gene expression knockdown using RT-PCR Primer: NALP4 (h)-PR: sc-61144-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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