SANTA CRUZ BIOTECHNOLOGY, INC.

NALP9 siRNA (h): sc-61151

BACKGROUND

NACHT-, LRR- and PYD-containing protein (NALP) family function in the regulation of apoptosis and inflammatory signaling pathways. Members of the NALP family (also designated Pyrin-containing APAF1-like proteins) include NALP1 through NALP11. Several family members, such as NALP1, NALP2, NALP3 and NALP6 influence NFκB and caspase pathways as components of the inflammasome. NALP5 (also designated MATER) is a maternal effect protein required for early embryonic development. Most short NALPs, such as NALP9 (NOD6), have a C-terminal leucine-rich repeat (LRR) region, an N-terminal Pyrin (MEFV) domain (PYD), followed by a NACHT domain and a NACHT-associated domain (NAD). The 986-amino acid NALP9 protein has the characteristic PYD-NACHT-LRR domain structure found in the NALP family and the NALP9 gene maps to chromosome 19q13.42, in a cluster with several other NALP genes.

REFERENCES

1. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 609663. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
2. Dalbiès-Tran, R., Papillier, P., Pennetier, S., Uzbekova, S. and Monget, P. 2005. Bovine mater-like NALP9 is an oocyte marker gene. Mol. Reprod. Dev. 71: 414-421.
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.
4. Ponsuksili, S., Brunner, R.M., Goldammer, T., Kühn, C., Walz, C., Chomdej, S., Tesfaye, D., Schellander, K., Wimmers, K. and Schwerin, M. 2006. Bovine NALP5, NALP8, and NALP9 genes: assignment to a QTL region and the expression in adult tissues, oocytes, and preimplantation embryos. Biol. Reprod. 74: 577-584.

CHROMOSOMAL LOCATION

Genetic locus: NLRP9 (human) mapping to 19q13.42.

PRODUCT

NALP9 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 NALP9 shRNA Plasmid (h): sc-61151-SH and NALP9 shRNA (h) Lentiviral Particles: sc-61151-V as alternate gene silencing products.

For independent verification of NALP9 (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-61151A, sc-61151B and sc-61151C.

PROTOCOLS

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

NALP9 siRNA (h) is recommended for the inhibition of NALP9 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 NALP9 gene expression knockdown using RT-PCR Primer: NALP9 (h)-PR: sc-61151-PR (20 µl, 586 bp). 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.