

NALP9B siRNA (m): sc-149819

BACKGROUND

NACHT-, LRR- and PYD-containing protein (NALP) family functions 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 NF κ B 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, a N-terminal pyrin (MEFV) domain (PYD), followed by a NACHT domain and a NACHT-associated domain (NAD). NALP9B (NALP9 NACHT, LRR and PYD domains-containing protein 9B), also known as Nlrp9, NALP9B or Nalp- δ , is a 1,003 amino acid cytoplasmic murine protein that is specifically expressed in oocyte and is thought to play a role in inflammation. NALP9B consists of one DAPIN domain, seven LLR repeats and one NACHT domain.

REFERENCES

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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.
5. Thélie, A., Papillier, P., Penetier, S., Perreau, C., Traverso, J.M., Uzbekova, S., Mermillod, P., Joly, C., Humblot, P. and Dalbiès-Tran, R. 2007. Differential regulation of abundance and deadenylation of maternal transcripts during bovine oocyte maturation *in vitro* and *in vivo*. *BMC Dev. Biol.* 7: 125.

CHROMOSOMAL LOCATION

Genetic locus: Nlrp9b (mouse) mapping to 7 A3.

PRODUCT

NALP9B 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see NALP9B shRNA Plasmid (m): sc-149819-SH and NALP9B shRNA (m) Lentiviral Particles: sc-149819-V as alternate gene silencing products.

For independent verification of NALP9B (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-149819A, sc-149819B and sc-149819C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

NALP9B siRNA (m) is recommended for the inhibition of NALP9B 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 μ M in 66 μ l. 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 NALP9B gene expression knockdown using RT-PCR Primer: NALP9B (m)-PR: sc-149819-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Peng, H., Lin, X., Liu, F., Wang, C. and Zhang, W. 2015. NLRP9B protein is dispensable for oocyte maturation and early embryonic development in the mouse. *J. Reprod. Dev.* 61: 559-564.

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.