

NALP4E siRNA (m): sc-149816

BACKGROUND

Members of the 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 NF κ B and caspase pathways as components of the inflammasome. NALP4E, also known as Nlrp4 or NALP- ϵ , is a 978 amino acid protein that, like other NALP family members, is thought to play a role in inflammation. NALP4E contains one DAPIN domain, six LRR (leucine-rich repeats) and a single NACHT domain. The gene encoding NALP4E maps to mouse chromosome 7 A3.

REFERENCES

1. Damiano, J.S., et al. 2004. Heterotypic interactions among NACHT domains: implications for regulation of innate immune responses. *Biochem. J.* 381: 213-219.
2. Sanz, C., et al. 2004. NALP1 is a transcriptional target for cAMP-response-element-binding protein (CREB) in myeloid leukaemia cells. *Biochem. J.* 384: 281-286.
3. Liu, F., et al. 2004. Expression of NALP1 in cerebellar granule neurons stimulates apoptosis. *Cell. Signal.* 16: 1013-1021.
4. Hamatani, T., et al. 2004. Age-associated alteration of gene expression patterns in mouse oocytes. *Hum. Mol. Genet.* 13: 2263-2278.
5. Drygin, D., et al. 2005. Induction of Toll-like receptors and NALP/PAN/PYPAF family members by modified oligonucleotides in lung epithelial carcinoma cells. *Oligonucleotides* 15: 105-118.
6. Ponsuksili, S., et al. 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: Nlrp4e (mouse) mapping to 7 A3.

PRODUCT

NALP4E 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 NALP4E shRNA Plasmid (m): sc-149816-SH and NALP4E shRNA (m) Lentiviral Particles: sc-149816-V as alternate gene silencing products.

For independent verification of NALP4E (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-149816A, sc-149816B and sc-149816C.

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 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

NALP4E siRNA (m) is recommended for the inhibition of NALP4E 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 NALP4E gene expression knockdown using RT-PCR Primer: NALP4E (m)-PR: sc-149816-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. Chang, B.H., et al. 2013. Developmental expression and possible functional roles of mouse Nlrp4e in preimplantation embryos. *In Vitro Cell. Dev. Biol. Anim.* 49: 548-553.

RESEARCH USE

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