SANTA CRUZ BIOTECHNOLOGY, INC.

NALP13 siRNA (h): sc-75862

BACKGROUND

NALPs (NACHT-, LRR- and PYD-containing proteins) comprise a subfamily of caterpiller proteins and function in the regulation of apoptosis and signaling pathways. Short NALP proteins contain an N-terminal Pyrin domain, as well as a NACHT domain, a NACHT-associated domain (NAD) and a C-terminal leucine-rich repeat (LRR) region, while long NALP proteins exhibit a C-terminal extension containing a function to find domain (FIIND) and a caspase recruitment domain (CARD). NALP13, also known as NLRP13 (NLR family, Pyrin domain containing 13), NOD14 or PAN13, is a 1,043 amino acid member of the NALP protein family and exists as a short NALP, containing one DAPIN domain, one NACHT domain and seven LRR repeats. Characteristic of NALP proteins, NALP13 functions as a component of inflammasomes and is involved in inflammatory responses throughout the body.

REFERENCES

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2. Chamaillard, M., et al. 2003. NODs, NALPs and NAIP: intracellular regulators of bacterial-induced inflammation. Cell. Microbiol. 5: 581-592.
3. Inohara, N. and Nuñez, G. 2003. NODs: intracellular proteins involved in inflammation and apoptosis. Nat. Rev. Immunol. 3: 371-382.
4. Tschopp, J., et al. 2003. NALPs: a novel protein family involved in inflammation. Nat. Rev. Mol. Cell Biol. 4: 95-104.
5. Petrilli, V., et al. 2005. The inflammasome. Curr. Biol. 15: R581.
6. Martinon, F. and Tschopp, J. 2007. Inflammatory caspases and inflammasomes: master switches of inflammation. Cell Death Differ. 14: 10-22.
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CHROMOSOMAL LOCATION

Genetic locus: NLRP13 (human) mapping to 19q13.43.

PRODUCT

NALP13 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 NALP13 shRNA Plasmid (h): sc-75862-SH and NALP13 shRNA (h) Lentiviral Particles: sc-75862-V as alternate gene silencing products.

For independent verification of NALP13 (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-75862A, sc-75862B and sc-75862C.

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

NALP13 siRNA (h) is recommended for the inhibition of NALP13 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 NALP13 gene expression knockdown using RT-PCR Primer: NALP13 (h)-PR: sc-75862-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.