SANTA CRUZ BIOTECHNOLOGY, INC.

NKLAM siRNA (h): sc-88628

BACKGROUND

NKLAM (natural killer lytic-associated molecule), also known as RNF19B (Ring finger protein 19B) or IBRDC3 (IBR domain-containing protein 3), is a 732 amino acid multi-pass membrane protein of the cytoplasmic granule that functions as an E3 ubiquitin-protein ligase. A member of the RBR family and RNF19 subfamily, NKLAM is expressed in activated macrophages, natural killer cells and cytotoxic T-cells where it functions in cytolytic activity. NKLAM undergoes alternative splicing events to produce four isoforms and contains one IBR-type zinc finger and two RING-type zinc fingers. NKLAM interacts with UBE2L3, UCKL1 and UBC8, and is induced by both IL-2 and IFN-β. The gene encoding NKLAM maps to human chromosome 1p35.1.

REFERENCES

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2. Portis, T., Anderson, J., Esposito, A. and Kornbluth, J. 2000. Gene structure of human and mouse NKLAM, a gene associated with cellular cytotoxicity. Immunogenetics 51: 546-555.
3. Ardley, H.C. and Robinson, P.A. 2005. E3 ubiquitin ligases. Essays Biochem. 41: 15-30.
4. Fortier, J.M. and Kornbluth, J. 2006. NK lytic-associated molecule, involved in NK cytotoxic function, is an E3 ligase. J. Immunol. 176: 6454-6463.
5. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 610872. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
6. Christensen, D.E. and Klevit, R.E. 2009. Dynamic interactions of proteins in complex networks: identifying the complete set of interacting E2s for functional investigation of E3-dependent protein ubiquitination. FEBS J. 276: 5381-5389.

CHROMOSOMAL LOCATION

Genetic locus: RNF19B (human) mapping to 1p35.1.

PRODUCT

NKLAM 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 NKLAM shRNA Plasmid (h): sc-88628-SH and NKLAM shRNA (h) Lentiviral Particles: sc-88628-V as alternate gene silencing products.

For independent verification of NKLAM (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-88628A, sc-88628B and sc-88628C.

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

NKLAM siRNA (h) is recommended for the inhibition of NKLAM 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 NKLAM gene expression knockdown using RT-PCR Primer: NKLAM (h)-PR: sc-88628-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.