SANTA CRUZ BIOTECHNOLOGY, INC.

Nore1 siRNA (h): sc-106788

BACKGROUND

Nore1, also known as RASSF5 (Ras association domain-containing family protein 5), RAPL or Maxp1, is a 418 amino acid protein that exists as four alternatively spliced isoforms which localize to the cytoplasm, as well as to growing microtubules and to the perinuclear region of unstimulated primary T cells. Expressed in a variety of tissues, Nore1 functions as a tumor suppressor that is involved in lymphocyte adhesion, lymphocyte polarization, apoptotic induction and directional movement of endothelial cells during wound healing. Nore1 contains one SARAH domain, one phorbol-ester/DAG-type zinc finger and one Ras-associating domain, through which it interacts with several Ras-like GTPases, proteins that play important roles in cellular growth and tumor transformation.

REFERENCES

1. Yao, R., et al. 2001. Chromosome mapping and sequence variation of the murine Ras effector gene Nore1. Cytogenet. Cell Genet. 95: 126-128.
2. Tommasi, S., et al. 2002. RASSF3 and Nore1: identification and cloning of two human homologues of the putative tumor suppressor gene RASSF1. Oncogene 21: 2713-2720.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607020. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Katagiri, K., et al. 2003. RAPL, a Rap 1-binding molecule that mediates Rap 1-induced adhesion through spatial regulation of LFA-1. Nat. Immunol. 4: 741-748.
5. Praskova, M., et al. 2004. Regulation of the MST1 kinase by autophosphorylation, by the growth inhibitory proteins, RASSF1 and Nore1, and by Ras. Biochem. J. 381: 453-462.
6. Katagiri, K., et al. 2004. Crucial functions of the Rap1 effector molecule RAPL in lymphocyte and dendritic cell trafficking. Nat. Immunol. 5: 1045-1051.

CHROMOSOMAL LOCATION

Genetic locus: RASSF5 (human) mapping to 1q32.1.

PRODUCT

Nore1 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 Nore1 shRNA Plasmid (h): sc-106788-SH and Nore1 shRNA (h) Lentiviral Particles: sc-106788-V as alternate gene silencing products.

For independent verification of Nore1 (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-106788A, sc-106788B and sc-106788C.

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

Nore1 siRNA (h) is recommended for the inhibition of Nore1 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.

GENE EXPRESSION MONITORING

Nore1 (10F10): sc-80017 is recommended as a control antibody for monitoring of Nore1 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Nore1 gene expression knockdown using RT-PCR Primer: Nore1 (h)-PR: sc-106788-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.