SANTA CRUZ BIOTECHNOLOGY, INC.

NOPAR siRNA (h): sc-106310

BACKGROUND

NOPAR, also known as MED12L (mediator of RNA polymerase II transcription subunit 12-like protein), TNRC11L (trinucleotide repeat-containing gene 11 protein-like), TRALP (thyroid hormone receptor-associated-like protein) or TRALPUSH, is a 2,145 amino acid nuclear protein that belongs to the mediator complex subunit 12 family. NOPAR exists as four alternatively spliced isoforms and may be a component of the mediator complex, a coactivator involved in the regulated transcription of nearly all RNA polymerase II-dependent genes. The complex functions as a bridge to convey information from gene-specific regulatory proteins to the basal RNA polymerase II transcription machinery. Recruited to promoters by direct interactions with regulatory proteins, the mediator complex serves as a scaffold for the assembly of a functional preinitiation complex with RNA polymerase II and general transcription factors. The gene that encodes NOPAR maps to human chromosome 3q25.1.

REFERENCES

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3. Conaway, R.C., Sato, S., Tomomori-Sato, C., Yao, T. and Conaway, J.W. 2005. The mammalian Mediator complex and its role in transcriptional regulation. Trends Biochem. Sci. 30: 250-255.
4. Malik, S. and Roeder, R.G. 2005. Dynamic regulation of pol II transcription by the mammalian Mediator complex. Trends Biochem. Sci. 30: 256-263.
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6. Tsutsui, T., Umemura, H., Tanaka, A., Mizuki, F., Hirose, Y. and Ohkuma, Y. 2008. Human mediator kinase subunit CDK11 plays a negative role in viral activator VP16-dependent transcriptional regulation. Genes Cells 13: 817-826.

CHROMOSOMAL LOCATION

Genetic locus: MED12L (human) mapping to 3q25.1.

PRODUCT

NOPAR 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 NOPAR shRNA Plasmid (h): sc-106310-SH and NOPAR shRNA (h) Lentiviral Particles: sc-106310-V as alternate gene silencing products.

For independent verification of NOPAR (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-106310A, sc-106310B and sc-106310C.

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

NOPAR siRNA (h) is recommended for the inhibition of NOPAR 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 NOPAR gene expression knockdown using RT-PCR Primer: NOPAR (h)-PR: sc-106310-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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.