SANTA CRUZ BIOTECHNOLOGY, INC.

MNDA siRNA (m): sc-40702

BACKGROUND

Interferon-inducible proteins include IFI-202, IFI-203, IFI-204 and D3, which are encoded by six or more structurally related and IFN-inducible mouse genes mapping at the q21-q23 region of chromosome 1. The proteins encoded by these genes have homologous 200 amino acid segments. IFI-202 is a primarily nuclear phosphoprotein which inhibits cell growth, in part by modulating transcriptional activity of NFκB, E2F, AP-1 and p53. Two related human proteins, MNDA (myeloid cell nuclear differentiation antigen) and IFI-16, have also been described. Expression of MNDA has been observed specifically in cells of the granulocyte-macrophage lineage. IFI-16 is constitutively expressed in various T and B cell lines and can be induced by IFN-γ in HL60 cells. At least four of the Gene 200 cluster of IFN-inducible proteins, IFI-202, IFI-204, MNDA and IFI-16, are localized in the nucleus.

REFERENCES

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2. Briggs, R.C., et al. 1994. The human myeloid cell nuclear differentiation antigen gene is one of at least two related interferon-inducible genes located on chromosome 1q that are expressed specifically in hematopoietic cells. Blood 83: 2153-2162.
3. Lengyel, P., et al. 1995. The interferon-activatable gene 200 cluster: from structure toward function. Semin. Virol. 6: 203-213.
4. Dawson, M.J. and Trapani, J.A. 1995. IFI 16 gene encodes a nuclear protein whose expression is induced by interferons in human myeloid leukaemia cell lines. J. Cell Biol. 57: 39-51.
5. Datta, B., et al. 1996. p202, an interferon-inducible modulator of transcription, inhibits transcriptional activation by the p53 tumor supressor protein and a segment from the p53-binding protein 1 that binds to p202 overcomes this inhibition. J. Biol. Chem. 271: 27544-27555.
6. Min, W., et al. 1996. The interferon-inducible p202 protein as a modulator of transcription: inhibition of NFκB, c-Fos and c-Jun activities. Mol. Cell. Biol. 16: 359-368.
7. Choubey, D., et al. 1996. Inhibition of E2F-mediated transcription by p202. EMBO J. 15: 5668-5678.
8. Kao, W.Y., et al. 1996. Characterization of the human myeloid cell nuclear differentiation antigen gene promoter. Biochem. Biophys. Acta 1308: 201-204.

CHROMOSOMAL LOCATION

Genetic locus: Mnda (mouse) mapping to 1 H3.

PROTOCOLS

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

PRODUCT

MNDA 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see MNDA shRNA Plasmid (m): sc-40702-SH and MNDA shRNA (m) Lentiviral Particles: sc-40702-V as alternate gene silencing products.

For independent verification of MNDA (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-40702A, sc-40702B and sc-40702C.

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

MNDA siRNA (h) is recommended for the inhibition of MNDA 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 MNDA gene expression knockdown using RT-PCR Primer: MNDA (m)-PR: sc-40702-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.