SANTA CRUZ BIOTECHNOLOGY, INC.

IFI-44 siRNA (h): sc-75320

BACKGROUND

The Interferon (IFN) family of proteins are able to alter the expression of a variety of target genes, thereby controlling a number of events within the cell. IFI-44 (interferon-induced protein 44), also known as p44 or MTAP44 (microtubule-associated protein 44), is a 444 amino acid protein that localizes to the cytoplasm and, upon induction by IFN-βs, aggregates to form microtubular structures. Human IFI-44 shares 97% sequence similarity with its chimp counterpart, suggesting a conserved role between species. The gene encoding IFI-44 maps to human chromosome 1, which spans 260 million base pairs, contains over 3,000 genes and comprises nearly 8% of the human genome. Chromosome 1 houses a large number of disease-associated genes, including those that are involved in familial adenomatous polyposis, Stickler syndrome, Parkinson's disease, Gaucher disease, schizophrenia and Usher syndrome. Aberrations in chromosome 1 are found in a variety of cancers, including head and neck cancer, malignant melanoma and multiple myeloma.

REFERENCES

1. Takahashi, K., et al. 1990. Cloning, sequencing and expression in *Escherichia coli* of cDNA for a non-A, non-B hepatitis-associated microtubular aggregates protein. J. Gen. Virol. 71: 2005-2011.
2. Kitamura, A., et al. 1994. Induction of the human gene for p44, a hepatitis-C-associated microtubular aggregate protein, by interferon-α/β. Eur. J. Biochem. 224: 877-883.
3. Izmailova, E., et al. 2003. HIV-1 Tat reprograms immature dendritic cells to express chemoattractants for activated T cells and macrophages. Nat. Med. 9: 191-197.
4. Hwang, Y., et al. 2006. Genetic predisposition of responsiveness to therapy for chronic hepatitis C. Pharmacogenomics 7: 697-709.
5. Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 610468. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: IFI44 (human) mapping to 1p31.1.

PRODUCT

IFI-44 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 IFI-44 shRNA Plasmid (h): sc-75320-SH and IFI-44 shRNA (h) Lentiviral Particles: sc-75320-V as alternate gene silencing products.

For independent verification of IFI-44 (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-75320A, sc-75320B and sc-75320C.

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

IFI-44 siRNA (h) is recommended for the inhibition of IFI-44 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 IFI-44 gene expression knockdown using RT-PCR Primer: IFI-44 (h)-PR: sc-75320-PR (20 µl, 534 bp). 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.