

IFN- α 8 siRNA (h): sc-92474

BACKGROUND

The genes encoding type I interferons (IFNs), which include fourteen IFN- α genes, one IFN- β gene, an IFN- ω (also known as IFN- α II1) gene, and a number of IFN- ω pseudogenes, are clustered on human chromosome 9p21.3. Interferon- α and - β are cytokines that are widely known to induce potent antiviral activity. They exert a variety of other biological effects, including antitumor and immunomodulatory activities and are increasingly used clinically to treat a range of malignancies, myelodysplasias and autoimmune diseases. IFN- ω is antigenically different from human IFN- α , IFN- β or IFN- γ , but is a component of natural mixtures of IFN species produced by virus-induced leukocytes or Burkitt's lymphoma cells. The type I interferon receptor (IFN- α R) interacts with IFN- α , IFN- β and IFN- ω , and seems to be a multisubunit receptor. IFN- α 8 (interferon α -8), also known as LeIF B (interferon α -B), is a 189 amino acid secreted protein that has antiviral activity and belongs to the α / β interferon family.

REFERENCES

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- Chen, J., Baig, E. and Fish, E.N. 2004. Diversity and relatedness among the type I interferons. *J. Interferon Cytokine Res.* 24: 687-698.
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CHROMOSOMAL LOCATION

Genetic locus: IFNA8 (human) mapping to 9p21.3.

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.

PRODUCT

IFN- α 8 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see IFN- α 8 shRNA Plasmid (h): sc-92474-SH and IFN- α 8 shRNA (h) Lentiviral Particles: sc-92474-V as alternate gene silencing products.

For independent verification of IFN- α 8 (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-92474A, sc-92474B and sc-92474C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

IFN- α 8 siRNA (h) is recommended for the inhibition of IFN- α 8 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 μ M in 66 μ l. 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 IFN- α 8 gene expression knockdown using RT-PCR Primer: IFN- α 8 (h)-PR: sc-92474-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.