



IRF-4 siRNA (h2): sc-270125

BACKGROUND

Interferon regulatory factor-4 (IRF-4) belongs to the IRF family of DNA-binding factors which regulate both interferon and interferon-inducible genes. Family members include IRF-1–7, ISGF-3 γ p48 and IFN consensus sequence-binding protein (ICSBP). IRF-4 is also known as lymphocyte specific interferon regulatory factor (LSIRF), multiple myeloma oncogene 1 and PU.1 interaction partner (Pip). A nuclear protein specific to lymphoid cells, IRF-4 is a transcriptional activator that binds to the interferon-stimulated response element (ISRE) of the MHC class I promoter.

REFERENCES

1. Fujita, T., et al. 1988. Evidence for a nuclear factor(s), IRF-1, mediating induction and silencing properties to human IFN- β gene regulatory elements. *EMBO J.* 7: 3397-3405.
2. Tanaka, N., et al. 1993. Recognition DNA sequence of interferon regulatory factor 1 (IRF-1) and IRF-2, regulators of cell growth and the interferon system. *Mol. Cell. Biol.* 13: 4531-4538.
3. Darnell, J.E., et al. 1994. Jak/STAT pathways and transcriptional activation in response to IFNs and other extracellular signaling proteins. *Science* 264: 1415-1421.
4. Grossman, A., et al. 1996. Cloning of human lymphocyte-specific interferon regulatory factor(hLSIRF/hIRF4) and mapping of the gene to 6p23-p25. *Genomics* 37: 229-233.
5. Iida, S., et al. 1997. Deregulation of MUM1/IRF4 by chromosomal translocation in multiple myeloma. *Nat. Genet.* 17: 226-230.
6. Mamane, Y., et al. 1999. Interferon regulatory factors: the next generation. *Gene* 237: 1-14.

CHROMOSOMAL LOCATION

Genetic locus: IRF4 (human) mapping to 6p25.3.

PRODUCT

IRF-4 siRNA (h2) 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 IRF-4 shRNA Plasmid (h2): sc-270125-SH and IRF-4 shRNA (h2) Lentiviral Particles: sc-270125-V as alternate gene silencing products.

For independent verification of IRF-4 (h2) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-270125A, sc-270125B and sc-270125C.

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.

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

IRF-4 siRNA (h2) is recommended for the inhibition of IRF-4 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.

GENE EXPRESSION MONITORING

IRF-4 (F-4): sc-48338 is recommended as a control antibody for monitoring of IRF-4 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-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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 IRF-4 gene expression knockdown using RT-PCR Primer: IRF-4 (h2)-PR: sc-270125-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.