SANTA CRUZ BIOTECHNOLOGY, INC.

IFI-35 siRNA (h): sc-93718

BACKGROUND

The Interferon family of proteins are able to alter the expression of a variety of target genes, thereby controlling various events within the cell. IFI-35 (Interferon-induced 35 kDa protein), also known as IFP35, is a 286 amino acid interferon-induced protein. Localized to the nucleus and expressed in macrophages, fibroblasts and epithelial cells, IFI-35 is a leucine zipper protein that can form homodimers, but, unlike most leucine zipper proteins, cannot bind DNA. Upon induction by IFN-α, IFI-35 associates with Nmi (N-Myc-interacting protein), resulting in the formation of a high molecular weight complex that is thought to play a role in IFN-α signaling and cellular responses. Once complexed with Nmi, IFI-35 is unable to be degraded by the proteasome, suggesting that IFI-35 is protected from degradation only when needed by IFN-α. Two isoforms of IFI-35 exist due to alternative splicing events.

REFERENCES

1. Bange, F.C., et al. 1994. IFP 35 is an interferon-induced leucine zipper protein that undergoes interferon-regulated cellular redistribution. J. Biol. Chem. 269: 1091-1098.
2. Wang, X., et al. 1996. IFP 35 forms complexes with B-ATF, a member of the AP1 family of transcription factors. Biochem. Biophys. Res. Commun. 229: 316-322.
3. Meyerdierks, A., et al. 1999. A cytoplasmic structure resembling large protein aggregates induced by interferons. J. Histochem. Cytochem. 47: 169-182.
4. Zhou, X., et al. 2000. Interferon-α induces nmi-IFP35 heterodimeric complex formation that is affected by the phosphorylation of IFP35. J. Biol. Chem. 275: 21364-21371.
5. Chen, J., et al. 2000. Interferon-inducible Myc/STAT-interacting protein Nmi associates with IFP 35 into a high molecular mass complex and inhibits proteasome-mediated degradation of IFP 35. J. Biol. Chem. 275: 36278-36284.
6. Chen, J. and Naumovski, L. 2002. Intracellular redistribution of interferon-inducible proteins Nmi and IFP 35 in apoptotic cells. J. Interferon Cytokine Res. 22: 237-243.

CHROMOSOMAL LOCATION

Genetic locus: IFI35 (human) mapping to 17q21.31.

PRODUCT

IFI-35 siRNA (h) is a pool of 2 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-35 shRNA Plasmid (h): sc-93718-SH and IFI-35 shRNA (h) Lentiviral Particles: sc-93718-V as alternate gene silencing products.

For independent verification of IFI-35 (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-93718A and sc-93718B.

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-35 siRNA (h) is recommended for the inhibition of IFI-35 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.

GENE EXPRESSION MONITORING

IFI-35 (B-1): sc-393513 is recommended as a control antibody for monitoring of IFI-35 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-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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 IFI-35 gene expression knockdown using RT-PCR Primer: IFI-35 (h)-PR: sc-93718-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.