SANTA CRUZ BIOTECHNOLOGY, INC.

IFIT1 siRNA (m): sc-75323

BACKGROUND

Interferon-induced protein with tetratricopeptide repeats 1 (IFIT1), also known as glucocorticoid-attenuated response gene 16 protein (GARG-16), is a 463 amino acid protein belonging to the IFIT family. Studies have shown that IFIT1 plays a dominant role in the host response to different viruses in the central nervous system. Also, increased levels of IFIT1 in pregnancy have implicated a role in the endometrial pathways critical for uterine support of peri-implantation conceptus survival, growth and implantation. Containing 10 TPR repeats, the gene encoding human IFIT1 maps to chromosome 10q23.31. Chromosome 10 contains over 800 genes and 135 million nucleotides, making up nearly 4.5% of the human genome.

REFERENCES

1. Chebath, J., et al. 1983. Interferon-induced 56,000 M_r protein and its mRNA in human cells: molecular cloning and partial sequence of the cDNA. Nucleic Acids Res. 11: 1213-1226.
2. Bluyssen, H.A., et al. 1994. Structure, chromosome localization, and regulation of expression of the interferon-regulated mouse Ifi54/Ifi56 gene family. Genomics 24: 137-148.
3. Smith, J.B., et al. 1996. The glucocorticoid attenuated response genes GARG-16, GARG-39, and GARG-49/IRG2 encode inducible proteins containing multiple tetratricopeptide repeat domains. Arch. Biochem. Biophys. 330: 290-300.
4. Kitamura, Y., et al. 2001. Lipopolysaccharide-induced switch between retinoid receptor (RXR) α and glucocorticoid attenuated response gene (GARG)-16 messenger RNAs in cultured rat microglia. J. Neurosci. Res. 64: 553-563.
5. Hua, J., et al. 2006. Functional assay of type I interferon in systemic lupus erythematosus plasma and association with anti-RNA binding protein autoantibodies. Arthritis Rheum. 54: 1906-1916.

CHROMOSOMAL LOCATION

Genetic locus: Ifit1 (mouse) mapping to 19 C1.

PRODUCT

IFIT1 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 IFIT1 shRNA Plasmid (m): sc-75323-SH and IFIT1 shRNA (m) Lentiviral Particles: sc-75323-V as alternate gene silencing products.

For independent verification of IFIT1 (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-75323A, sc-75323B and sc-75323C.

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

IFIT1 siRNA (m) is recommended for the inhibition of IFIT1 expression in mouse 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 IFIT1 gene expression knockdown using RT-PCR Primer: IFIT1 (m)-PR: sc-75323-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.