SANTA CRUZ BIOTECHNOLOGY, INC.

# IFITM3 siRNA (m): sc-62349

## BACKGROUND

Interferons (IFNs) are potential antitumor agents, as they exhibit antiproliferative and differentiating properties, in addition to functioning in the defense against microbial infections. IFN exposure induces the regulation of expression levels of cellular proteins that mediate the pleiotropic effects of interferons. These effects may be mediated by soluble factors or by cell-cell interactions involving specific membrane proteins. The IFITM family of proteins are transmembrane proteins so named because their expression is IFN-inducible. IFITM proteins have been found upregulated in human colorectal carcinomas. Fragilis, also known as Fgls, IP15, Cd225, mil-1, Cdw217 or DSPA2, is a 137 amino acid single-pass type II membrane murine protein that is predominantly expressed in nascent primordial germ cells and in gonadal germ cells. Induced by IFN-$\alpha$, Fragilis acts as an antiviral protein and inhibits the entry of viruses to the host cell cytoplasm, permitting endocytosis, but preventing subsequent viral fusion and release of viral contents into the cytosol. The gene encoding Fragilis maps to mouse chromosome 7 F5.

## REFERENCES


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8. Huang, I.C., et al. 2011. Distinct patterns of IFITM-mediated restriction of filoviruses, SARS coronavirus, and influenza A virus. PLoS Pathog. 7: e1001258.
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## CHROMOSOMAL LOCATION

Genetic locus: Ifitm3 (mouse) mapping to 7 F5.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PRODUCT

IFITM3 siRNA (m) 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 IFITM3 shRNA Plasmid (m): sc-62349-SH and IFITM3 shRNA (m) Lentiviral Particles: sc-62349-V as alternate gene silencing products.

For independent verification of IFITM3 (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-62349A and sc-62349B.

## 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

IFITM3 siRNA (m) is recommended for the inhibition of IFITM3 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 IFITM3 gene expression knockdown using RT-PCR Primer: IFITM3 (m)-PR: sc-62349-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.