

# IFIT3 (N-17): sc-82954

## BACKGROUND

The tetratricopeptide repeat (TPR) motif is a degenerate, 34 amino acid sequence found in many proteins and acts to mediate protein-protein interactions in various pathways. At the sequence level, there can be up to 16 tandem TPR repeats, each of which has a helix-turn-helix shape that stacks on other TPR repeats to achieve ligand binding specificity. IFIT3 (interferon-induced protein with tetratricopeptide repeats 3), also known as IRG2, IFI60, IFIT4, ISG60 or RIG-G, is a 490 amino acid protein that contains 8 TPR repeats and may play a role in cell cycle regulation and cellular proliferation. The gene encoding IFIT3 maps to human chromosome 10, which houses over 1,200 genes and comprises nearly 4.5% of the human genome. Defects in some of the genes that map to chromosome 10 are associated with Charcot-Marie-Tooth disease, Jackson-Weiss syndrome, Usher syndrome, nonsyndromic deafness, Wolman's syndrome, Cowden syndrome, multiple endocrine neoplasia type 2 and porphyria.

## REFERENCES

1. Yu, M., et al. 1997. Cloning of a gene (RIG-G) associated with retinoic acid-induced differentiation of acute promyelocytic leukemia cells and representing a new member of a family of interferon-stimulated genes. *Proc. Natl. Acad. Sci. USA* 94: 7406-7411.
2. Zhu, H., et al. 1997. Use of differential display analysis to assess the effect of human cytomegalovirus infection on the accumulation of cellular RNAs: induction of interferon-responsive RNAs. *Proc. Natl. Acad. Sci. USA* 94: 13985-13990.
3. de Veer, M.J., et al. 1998. IFI60/ISG60/IFIT4, a new member of the human IFI54/IFIT2 family of interferon-stimulated genes. *Genomics* 54: 267-277.
4. Cortajarena, A.L., et al. 2004. Protein design to understand peptide ligand recognition by tetratricopeptide repeat proteins. *Protein Eng. Des. Sel.* 17: 399-409.
5. Cliff, M.J., et al. 2005. Molecular recognition via coupled folding and binding in a TPR domain. *J. Mol. Biol.* 346: 717-732.
6. Xiao, S., et al. 2006. RIG-G as a key mediator of the antiproliferative activity of interferon-related pathways through enhancing p21 and p27 proteins. *Proc. Natl. Acad. Sci. USA* 103: 16448-16453.
7. Kajander, T., et al. 2007. Structure and stability of designed TPR protein superhelices: unusual crystal packing and implications for natural TPR proteins. *Acta Crystallogr. D Biol. Crystallogr.* 63: 800-811.

## CHROMOSOMAL LOCATION

Genetic locus: IFIT3 (human) mapping to 10q23.31.

## SOURCE

IFIT3 (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of IFIT3 of human origin.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-82954 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

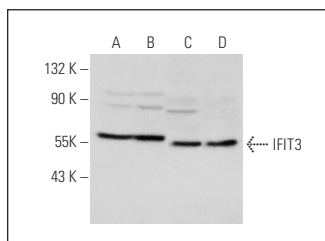
IFIT3 (N-17) is recommended for detection of IFIT3 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other IFIT family members.

Suitable for use as control antibody for IFIT3 siRNA (h): sc-75326, IFIT3 shRNA Plasmid (h): sc-75326-SH and IFIT3 shRNA (h) Lentiviral Particles: sc-75326-V.

Molecular Weight of IFIT3: 58 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209, CCRF-CEM cell lysate: sc-2225 or K-562 whole cell lysate: sc-2203.

## DATA



IFIT3 (N-17): sc-82954. Western blot analysis of IFIT3 expression in CCRF-CEM (A), HL-60 (B), SK-MEL-24 (C) and K-562 (D) whole cell lysates.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **IFIT3 (B-7): sc-393512** or **IFIT3 (E-10): sc-393396**, our highly recommended monoclonal alternatives to IFIT3 (N-17).