

## IFIT2 (V-16): sc-82646

### 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. IFIT2 (interferon-induced protein with tetratricopeptide repeats 2), also known as G10P2 or IFI54, is a 472 amino acid protein that contains 6 TPR repeats and may be involved in the negative regulation of cell growth and proliferation. The gene encoding IFIT2 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

- Ulker, N., Zhang, X. and Samuel, C.E. 1987. Mechanism of interferon action. I. Characterization of a 54 kDa protein induced by  $\gamma$  interferon with properties similar to a cytoskeletal component. *J. Biol. Chem.* 262: 16798-16803.
- Wathelet, M.G., Szpirer, J., Nols, C.B., Clauss, I.M., De Wit, L., Islam, M.O., Levan, G., Horisberger, M.A., Content, J. and Szpirer, C. 1988. Cloning and chromosomal location of human genes inducible by type I interferon. *Somat. Cell Mol. Genet.* 14: 415-426.
- Lafage, M., Clauss, I., Couez, D., Simonetti, J., Wathelet, M.G. and Huez, G. 1992. The interferon- and virus-inducible IFI-56K and IFI-54K genes are located on human chromosome 10 at bands q23-q24. *Genomics* 13: 458-460.
- Zhu, H., Cong, J.P. and Shenk, T. 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.
- Young, J.C., Obermann, W.M. and Hartl, F.U. 1998. Specific binding of tetratricopeptide repeat proteins to the C-terminal 12 kDa domain of HSP 90. *J. Biol. Chem.* 273: 18007-18010.
- Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2000. Johns Hopkins University, Baltimore, MD. MIM Number: 147040. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Cortajarena, A.L., Kajander, T., Pan, W., Cocco, M.J. and Regan, L. 2004. Protein design to understand peptide ligand recognition by tetratricopeptide repeat proteins. *Protein Eng. Des. Sel.* 17: 399-409.
- Saha, S., Sugumar, P., Bhandari, P. and Rangarajan, P.N. 2006. Identification of Japanese encephalitis virus-inducible genes in mouse brain and characterization of GARG39/IFIT2 as a microtubule-associated protein. *J. Gen. Virol.* 87: 3285-3289.
- Lai, K.C., Chang, K.W., Liu, C.J., Kao, S.Y. and Lee, T.C. 2008. IFN-induced protein with tetratricopeptide repeats 2 inhibits migration activity and increases survival of oral squamous cell carcinoma. *Mol. Cancer Res.* 6: 1431-1439.

### CHROMOSOMAL LOCATION

Genetic locus: Ifit2 (mouse) mapping to 19 C1.

### SOURCE

IFIT2 (V-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of IFIT2 of mouse origin.

### PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-82646 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

IFIT2 (V-16) is recommended for detection of IFIT2 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 IFIT2 siRNA (m): sc-75325, IFIT2 shRNA Plasmid (m): sc-75325-SH and IFIT2 shRNA (m) Lentiviral Particles: sc-75325-V.

Molecular Weight of IFIT2: 55 kDa.

### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz<sup>™</sup> Mounting Medium: sc-24941.

### STORAGE

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

### RESEARCH USE

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


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Try **IFIT2 (G-9): sc-398610**, our highly recommended monoclonal alternative to IFIT2 (V-16).