SANTA CRUZ BIOTECHNOLOGY, INC.

IFITM3 (F-41): sc-100768

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The Power to Question

BACKGROUND

IFITM3 (interferon induced transmembrane protein 3), also known as 1-8U or IP15, is a multi-pass membrane protein that belongs to the IFITM (interferon inducible transmembrane) family of proteins. IFITM proteins are induced by type I and type II interferons and contain multiple interferon (IFN)-stimulated response elements (ISREs) in their promoter regions. IFITM proteins play important roles in many cellular processes and their expression requires the presence of the chromatin remodeling SWI/SNF-like BAF complexes. Cellular processes involving IFITM proteins include cellular anti-proliferative activities and homotypic cell adhesion functions of interferons. In addition, IFITM genes are often upregulated in various cancer cells, suggesting a possible role in carcinogenesis. Localizing to the membrane, IFITM3 is a 133 amino acid protein that is induced by IFN-α and IFN-γ. IFITM3 expression can be regulated by TEF-1, Brg-1 and Sp1.

REFERENCES

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3. Liu, H., et al. 2002. Maximal induction of a subset of interferon target genes requires the chromatin-remodeling activity of the BAF complex. Mol. Cell. Biol. 22: 6471-6479.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 605579. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Tanaka, S.S., et al. 2005. IFITM/Mil/Fragilis family proteins IFITM1 and IFITM3 play distinct roles in mouse primordial germ cell homing and repulsion. Dev. Cell 9: 745-756.
6. Andreu, P., et al. 2006. Identification of the IFITM family as a new molecular marker in human colorectal tumors. Cancer Res. 66: 1949-1955.
7. Saetre, P., et al. 2007. Inflammation-related genes upregulated in schizophrenia brains. BMC Psychiatry 7: 46.
8. Craig, F.E., et al. 2007. Gene expression profiling of Epstein-Barr virus-positive and -negative monomorphic B cell posttransplant lymphoproliferative disorders. Diagn. Mol. Pathol. 16: 158-168.
9. Cuddapah, S., et al. 2008. Transcriptional enhancer factor 1 (TEF-1/TEAD1) mediates activation of IFITM3 gene by BRGI. FEBS Lett. 582: 391-397.

CHROMOSOMAL LOCATION

Genetic locus: IFITM3 (human) mapping to 11p15.5.

SOURCE

IFITM3 (F-41) is a mouse monoclonal antibody raised against recombinant IFITM3 of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

IFITM3 (F-41) is recommended for detection of IFITM3 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for IFITM3 siRNA (h): sc-97053, IFITM3 shRNA Plasmid (h): sc-97053-SH and IFITM3 shRNA (h) Lentiviral Particles: sc-97053-V.

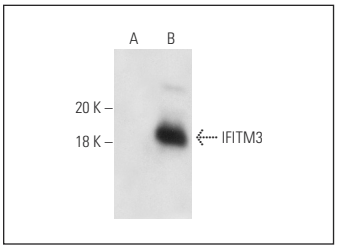
Molecular Weight of IFITM3: 14 kDa.

Positive Controls: IFITM3 (h): 293T Lysate: sc-110589 or HeLa whole cell lysate: sc-2200.

RECOMMENDED SUPPORT REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



IFITM3 (F-41): sc-100768. Western blot analysis of IFITM3 expression in non-transfected: sc-117752 (**A**) and human IFITM3 transfected: sc-110589 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Feng, J., et al. 2018. Interferon-stimulated gene (ISG)-expression screening reveals the specific antibunyaviral activity of ISG20. J. Virol. 92: e02140-17.

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.