

IFITM3 (h): 293T Lysate: sc-110589

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

- Lewin, A.R., Reid, L.E., McMahon, M., Stark, G.R. and Kerr, I.M. 1991. Molecular analysis of a human interferon-inducible gene family. *Eur. J. Biochem.* 199: 417-423.
- Pru, J.K., Austin, K.J., Haas, A.L. and Hansen, T.R. 2001. Pregnancy and interferon- τ upregulate gene expression of members of the 1-8 family in the bovine uterus. *Biol. Reprod.* 65: 1471-1480.
- Liu, H., Kang, H., Liu, R., Chen, X. and Zhao, K. 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.
- Tanaka, S.S., Yamaguchi, Y.L., Tsoi, B., Lickert, H. and Tam, P.P. 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.
- Andreu, P., Colnot, S., Godard, C., Laurent-Puig, P., Lamarque, D., Kahn, A., Perret, C. and Romagnolo, B. 2006. Identification of the IFITM family as a new molecular marker in human colorectal tumors. *Cancer Res.* 66: 1949-1955.
- Online Mendelian Inheritance in Man, OMIM[™]. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 605579. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Saetre, P., Emilsson, L., Axelsson, E., Kreuger, J., Lindholm, E. and Jazin, E. 2007. Inflammation-related genes upregulated in schizophrenia brains. *BMC Psychiatry* 7: 46.
- Craig, F.E., Johnson, L.R., Harvey, S.A., Nalesnik, M.A., Luo, J.H., Bhattacharya, S.D. and Swerdlow, S.H. 2007. Gene expression profiling of Epstein-Barr virus-positive and -negative monomorphic B cell posttransplant lymphoproliferative disorders. *Diagn. Mol. Pathol.* 16: 158-168.
- Cuddapah, S., Cui, K. and Zhao, K. 2008. Transcriptional enhancer factor 1 (TEF-1/TEAD1) mediates activation of IFITM3 gene by BRG1. *FEBS Lett.* 582: 391-397.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

CHROMOSOMAL LOCATION

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

PRODUCT

IFITM3 (h): 293T Lysate represents a lysate of human IFITM3 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

IFITM3 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive IFITM3 antibodies. Recommended use: 10-20 μ l per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

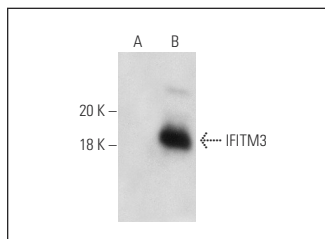
IFITM3 (F-41): sc-100768 is recommended as a positive control antibody for Western Blot analysis of enhanced human IFITM3 expression in IFITM3 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:

1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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.

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.

RESEARCH USE

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

PROTOCOLS

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