# IFITM3 (m): 293T Lysate: sc-126867



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- $\alpha$  and IFN- $\gamma$ . 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.
- 2. 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.
- 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., 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.
- Saetre, P., Emilsson, L., Axelsson, E., Kreuger, J., Lindholm, E. and Jazin, E. 2007. Inflammation-related genes up-regulated in schizophrenia brains. BMC Psychiatry 7: 46.
- 8. 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.
- 9. Cuddapah, S., Cui, K. and Zhao, K. 2008. Transcriptional enhancer factor 1 (TEF-1/TEAD1) mediates activation of IFITM3 gene by BRGI. 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 (mouse) mapping to 7 F5.

### **PRODUCT**

IFITM3 (m): 293T Lysate represents a lysate of mouse IFITM3 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

#### **APPLICATIONS**

IFITM3 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive IFITM3 antibodies. Recommended use: 10-20 µl per lane.

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

# **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.

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