SANTA CRUZ BIOTECHNOLOGY, INC.

IFITM2/3 (N-14): sc-131568



BACKGROUND

Interferons (IFNs) are >potential anti-tumor agents, as they exhibit anti-proliferative and differentiating properties, in addition to functioning in the defense against microbial infections. IFN exposure induces the regulation of expression levels of cellular proteins that mediate the pleiotropic effects of interferons. These effects may be mediated by soluble factors or by cell-cell interactions involving specific membrane proteins. The IFITM family of proteins are transmembrane proteins that are upregulated in human colorectal carcinomas. IFITM2 (interferon induced transmembrane protein 2), also known as 1-8D, and IFITM3 (interferon induced transmembrane protein 3), also designated 1-8U, are multi-pass membrane proteins belonging to the CD225 family and are induced by IFN- α and IFN- γ .

REFERENCES

- 1. Reid, L.E., Brasnett, A.H., Gilbert, C.S., Porter, A.C., Gewert, D.R., Stark, G.R. and Kerr, I.M. 1989. A single DNA response element can confer inducibility by both α and γ -interferons. Proc. Natl. Acad. Sci. USA 86: 840-844.
- Deblandre, G.A., Marinx, O.P., Evans, S.S., Majjaj, S., Leo, O., Caput, D., Huez, G.A. and Wathelet, M.G. 1995. Expression cloning of an interferoninducible 17-kDa membrane protein implicated in the control of cell growth. J. Biol. Chem. 270: 23860-23866.
- Perry, D.J., Austin, K.J. and Hansen, T.R. 1999. Cloning of interferon-stimulated gene 17: the promoter and nuclear proteins that regulate transcription. Mol. Endocrinol. 13: 1197-1206.
- Saitou, M., Barton, S.C. and Surani, M.A. 2002. A molecular programme for the specification of germ cell fate in mice. Nature 418: 293-300.
- Akyerli, C.B., Beksac, M., Holko, M., Frevel, M., Dalva, K., Ozbek, U., Soydan, E., Ozcan, M., Ozet, G., Ilhan, O., Gürman, G., Akan, H., Williams, B.R. and Ozçelik, T. 2005. Expression of IFITM1 in chronic myeloid leukemia patients. Leuk. Res. 29: 283-286.
- Wylie, C. 2005. IFITM1-mediated cell repulsion controls the initial steps of germ cell migration in the mouse. Dev. Cell 9: 723-724.
- 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.

CHROMOSOMAL LOCATION

Genetic locus: IFITM2 (human) mapping to 11p15.5, IFITM3 (human) mapping to 11p15.5.

SOURCE

IFITM2/3 (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of IFITM2 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-131568 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

IFITM2/3 (N-14) is recommended for detection of IFITM2 and IFITM3 of human 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 family members IFITM1 or IFITM5.

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™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluo-rescence: 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™ 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.

PROTOCOLS

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

MONOS Satisfation Guaranteed

Try IFITM1/2/3 (F-12): sc-374026 or IFITM3 (F-41):

sc-100768, our highly recommended monoclonal alternatives to IFITM2/3 (N-14).