SANTA CRUZ BIOTECHNOLOGY, INC.

IFIT2 (F-12): sc-390724

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 six 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, nonsyndromatic deafness, Wolman's syndrome, Cowden syndrome, multiple endocrine neoplasia type 2 and porphyria.

CHROMOSOMAL LOCATION

Genetic locus: IFIT2 (human) mapping to 10q23.31.

SOURCE

IFIT2 (F-12) is a mouse monoclonal antibody raised against amino acids 301-450 mapping near the C-terminus of IFIT2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

IFIT2 (F-12) is available conjugated to agarose (sc-390724 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390724 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390724 PE), fluorescein (sc-390724 FITC), Alexa Fluor® 488 (sc-390724 AF488), Alexa Fluor® 546 (sc-390724 AF546), Alexa Fluor® 594 (sc-390724 AF594) or Alexa Fluor® 647 (sc-390724 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390724 AF680) or Alexa Fluor® 790 (sc-390724 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

IFIT2 (F-12) is recommended for detection of IFIT2 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for IFIT2 siRNA (h): sc-75324, IFIT2 shRNA Plasmid (h): sc-75324-SH and IFIT2 shRNA (h) Lentiviral Particles: sc-75324-V.

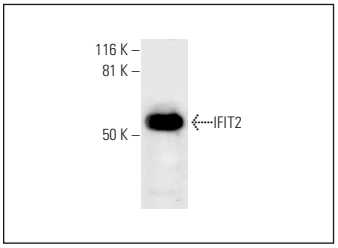
Molecular Weight of IFIT2: 55 kDa.

Positive Controls: SCC-25 whole cell lysate.

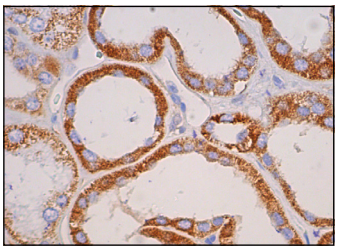
STORAGE

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

DATA



IFIT2 (F-12): sc-390724. Western blot analysis of IFIT2 expression in SCC-25 whole cell lysate.



IFIT2 (F-12): sc-390724. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in tubules.

SELECT PRODUCT CITATIONS

1. Sanpui, P., et al. 2014. Single-walled carbon nanotubes increase pandemic influenza A H1N1 virus infectivity of lung epithelial cells. Part. Fibre Toxicol. 11: 66.
2. Jia, H., et al. 2016. The LIM protein AJUBA promotes colorectal cancer cell survival through suppression of JAK1/Stat1/IFIT2 network. Oncogene 36: 2655-2666.
3. Tang, W.G., et al. 2017. Long non-coding RNA00364 represses hepato-cellular carcinoma cell proliferation via modulating p-Stat3-IFIT2 signaling axis. Oncotarget 8: 102006-102019.
4. Ishikawa, C., et al. 2018. Mitotic kinase PBK/TOPK as a therapeutic target for adult T-cell leukemia/lymphoma. Int. J. Oncol. 53: 801-814.
5. Koch, S., et al. 2019. Kaposi's sarcoma-associated herpesvirus vIRF2 protein utilizes an IFN-dependent pathway to regulate viral early gene expression. PLoS Pathog. 15: e1007743.
6. Kerr, C.H., et al. 2020. Dynamic rewiring of the human interactome by interferon signaling. Genome Biol. 21: 140.
7. Linville, A.C., et al. 2022. Dysregulation of cellular VRK1, BAF, and innate immune signaling by the vaccinia virus B12 pseudokinase. J. Virol. 96: e0039822.
8. Zhu, Z., et al. 2023. The Interferon-induced protein with tetratricopeptide repeats repress influenza virus infection by inhibiting viral RNA synthesis. Viruses 15: 1412.
9. Lai, K.C., et al. 2023. IFIT2 depletion promotes cancer stem cell-like phenotypes in oral cancer. Biomedicines 11: 896.
10. Li, J., et al. 2024. cGAS-ISG15-RAGE axis reprogram necroptotic micro-environment and promote lymphatic metastasis in head and neck cancer. Exp. Hematol. Oncol. 13: 63.

RESEARCH USE

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