SANTA CRUZ BIOTECHNOLOGY, INC.

IFIT3 (B-7): sc-393512



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. IFIT3 (interferon-induced protein with tetratricopeptide repeats 3), also known as IRG2, IFI60, IFIT4, ISG60 or RIG-G, is a 490 amino acid protein that contains eight TPR repeats and may play a role in cell cycle regulation and cellular proliferation. The gene encoding IFIT3 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: IFIT3 (human) mapping to 10q23.31.

SOURCE

IFIT3 (B-7) is a mouse monoclonal antibody raised against amino acids 286-490 mapping at the C-terminus of IFIT3 of human origin.

PRODUCT

Each vial contains 200 μg lgG1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

IFIT3 (B-7) is available conjugated to agarose (sc-393512 AC), 500 μg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393512 HRP), 200 μg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393512 PE), fluorescein (sc-393512 FITC), Alexa Fluor[®] 488 (sc-393512 AF488), Alexa Fluor[®] 546 (sc-393512 AF546), Alexa Fluor[®] 594 (sc-393512 AF594) or Alexa Fluor[®] 647 (sc-393512 AF647), 200 μg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-393512 AF680) or Alexa Fluor[®] 790 (sc-393512 AF790), 200 μg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

IFIT3 (B-7) is recommended for detection of IFIT3 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 IFIT3 siRNA (h): sc-75326, IFIT3 shRNA Plasmid (h): sc-75326-SH and IFIT3 shRNA (h) Lentiviral Particles: sc-75326-V.

Molecular Weight of IFIT3: 58 kDa.

Positive Controls: Caki-1 cell lysate: sc-2224, SK-MEL-28 cell lysate: sc-2236 or WI-38 whole cell lysate: sc-364260.

STORAGE

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

DATA



IFIT3 (B-7): sc-393512. Western blot analysis of IFIT3 expression in Caki-1 (A), SK-MEL-28 (B), BJ (C) and WI-38 (D) whole cell lysates.



IFIT3 (B-7): sc-393512. Immunofluorescence staining of formalin-fixed A-431 cells showing cytoplasmic localization in a subset of cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in tubules (**B**).

SELECT PRODUCT CITATIONS

- 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.
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- Liu, R., et al. 2019. Vaccinia virus ankyrin-repeat/F-box protein targets interferon-induced IFITs for proteasomal degradation. Cell Rep. 29: 816-828.e6.
- 4. Zhao, L., et al. 2020. A long non-coding RNA IVRPIE promotes host antiviral immune responses through regulating interferon β 1 and ISG expression. Front. Microbiol. 11: 260.
- 5. Kim, Y.E., et al. 2021. SILAC-based quantitative proteomic analysis of oxaliplatin-resistant pancreatic cancer cells. Cancers 13: 724.
- Talbot-Cooper, C., et al. 2022. Poxviruses and paramyxoviruses use a conserved mechanism of Stat1 antagonism to inhibit interferon signaling. Cell Host Microbe 30: 357-372.e11.
- 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. Tsai, M., et al. 2022. The E3 ligase subunit FBX045 binds the interferon- λ receptor and promotes its degradation during influenza virus infection. J. Biol. Chem. 298: 102698.
- Lu, Y., et al. 2022. Manipulation of innate immune signaling pathways by SARS-CoV-2 non-structural proteins. Front. Microbiol. 13: 1027015.

RESEARCH USE

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