IFN-γRα (2E2): sc-12753

SANTA CRUZ®

BIOTECHNOLOGY

The Power to Question

BACKGROUND

IFN-γ induces a variety of biological responses, such as antiviral, antiprolifer-ative and immunomodulatory activity in sensitive cells. Activation of the IFN-γ receptor (IFN-γR) leads to autophosphorylation of the Janus kinases JAK1 and JAK2, and the nuclear translocation of the transcription factors Stat1α p91 and Stat1β p84. The IFN-γR is composed of at least two chains, designated IFN-γRα and IFN-γRβ, respectively. Although expression of IFN-γRα is suffi-cient for ligand binding, it alone does not confer responsiveness to IFN-γ. Concomitant expression of IFN-γRα and IFN-γRβ is required for transcriptional activation of IFN-γ-inducible genes. The IFN-γRβ chain, also called AF-1, is 332 and 337 amino acids in length in mouse and human, respectively, and may represent the signal transducing component of the IFN-γR.

CHROMOSOMAL LOCATION

Genetic locus: IFNGR1 (human) mapping to 6q23.3; Ifngr1 (mouse) mapping to 10 A3.

SOURCE

IFN-γRα (2E2) is a Armenian hamster monoclonal antibody epitope mapping to the extracellular domain of IFN-γRα of mouse origin.

PRODUCT

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

IFN-γRα (2E2) is available conjugated to agarose (sc-12753 AC), 500 μg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-12753 HRP), 200 μg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-12753 PE), fluorescein (sc-12753 FITC), Alexa Fluor® 488 (sc-12753 AF488), Alexa Fluor® 546 (sc-12753 AF546), Alexa Fluor® 594 (sc-12753 AF594) or Alexa Fluor® 647 (sc-12753 AF647), 200 μg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-12753 AF680) or Alexa Fluor® 790 (sc-12753 AF790), 200 μg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

IFN-γRα (2E2) is recommended for detection of IFN-γRα of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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) and flow cytometry (1 μg per 1 x 10^6 cells).

Suitable for use as control antibody for IFN-γRα siRNA (h): sc-29357, IFN-γRα siRNA (m): sc-35636, IFN-γRα shRNA Plasmid (h): sc-29357-SH, IFN-γRα shRNA Plasmid (m): sc-35636-SH, IFN-γRα shRNA (h) Lentiviral Particles: sc-29357-V and IFN-γRα shRNA (m) Lentiviral Particles: sc-35636-V.

Molecular Weight of IFN-γRα: 80-95 kDa.
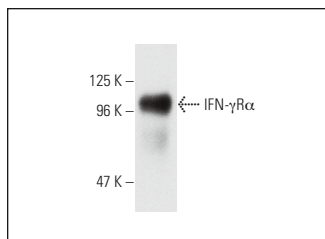
Positive Controls: BYDP whole cell lysate: sc-364368.

STORAGE

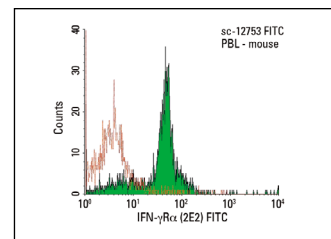Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

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

DATA

IFN-γRα (2E2): sc-12753. Western blot analysis of IFN-γRα expression in BYDP whole cell lysate.

IFN-γRα (2E2) FITC: sc-12753 FITC. FCM analysis of mouse peripheral blood leukocytes. Black line histo-gram represents the isotype control, normal Armenian hamster IgG-FITC: sc-2864.

SELECT PRODUCT CITATIONS

1. Morgan, R., et al. 2004. N-acetylglucosaminyltransferase V (Mgat5)-mediated N-glycosylation negatively regulates Th1 cytokine production by T cells. J. Immunol. 173: 7200-7208.

2. Ito, T., et al. 2005. Interferon-γ is a potent inducer of catagen-like changes in cultured human anagen hair follicles. Br. J. Dermatol. 152: 623-631.

3. Sánchez, M.D., et al. 2006. Functional and phenotypic changes in mono-cytes from patients with tuberculosis are reversed with treatment. Microbes Infect. 8: 2492-2500.

4. Numasaki, M., et al. 2007. IL-28 elicits antitumor responses against murine fibrosarcoma. J. Immunol. 178: 5086-5098.

5. Neves, J.S., et al. 2008. Eosinophil granules function extracellularly as receptor-mediated secretory organelles. Proc. Natl. Acad. Sci. USA 105: 18478-18483.

6. Mizuno, T., et al. 2008. Interferon-γ directly induces neurotoxicity through a neuron specific, calcium-permeable complex of IFN-γ receptor and AMPA GluR1 receptor. FASEB J. 22: 1797-1806.

7. Chen, L., et al. 2019. Exosomes derived from T regulatory cells suppress CD8+ cytotoxic T lymphocyte proliferation and prolong liver allograft survival. Med. Sci. Monit. 25: 4877-4884.

8. Shan, X., et al. 2022. Serine metabolism orchestrates macrophage polar-ization by regulating the IGF1-p38 axis. Cell. Mol. Immunol. 19: 1263-1278.

PROTOCOLS

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

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