SANTA CRUZ BIOTECHNOLOGY, INC.

IFN-γRα (F-6): sc-74450

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

IFN-γ induces a variety of biological responses, such as antiviral, antiproliferative 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 sufficient 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.

REFERENCES

1. Orchansky, P., et al. 1984. Type I and type II interferon receptors. J. Interferon Res. 4: 275-282.
2. Novick, D., et al. 1987. The human interferon-γ receptor, purification, characterization and preparation of antibodies. J. Biol. Chem. 262: 8483-8487.
3. Aguet, M., et al. 1988. Molecular cloning and expression of the human interferon-γ receptor. Cell 55: 273-280.
4. Silvennoinen, O., et al. 1993. Interferon-induced nuclear signalling by JAK protein tyrosine kinases. Nature 366: 583-585.
5. Farrar, M.A., et al. 1993. The molecular cell biology of interferon-γ and its receptor. Annu. Rev. Immunol. 11: 571-611.
6. Soh, J., et al. 1994. Identification and sequence of an accessory factor required for activation of the human interferon-γ receptor. Cell 76: 793-802.
7. Hemmi, S., et al. 1994. A novel member of the interferon receptor family complements functionality of the murine interferon-γ receptor in human cells. Cell 76: 803-810.
8. Darnell, J.E., Jr., et al. 1994. JAK/Stat pathways and transcriptional activation in response to IFNs and other extracellular signaling proteins. Science 264: 1415-1421.
9. Vilcek, J., et al. 1994. Recent progress in the elucidation of interferon-γ actions: molecular biology and biological functions. Int. Arch. Allergy Immunol. 104: 311-316.

CHROMOSOMAL LOCATION

Genetic locus: Ifngr1 (mouse) mapping to 10 A3.

SOURCE

IFN-γRα (F-6) is a mouse monoclonal antibody raised against amino acids 178-477 of IFN-γRα of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

IFN-γRα (F-6) is recommended for detection of IFN-γRα of mouse 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

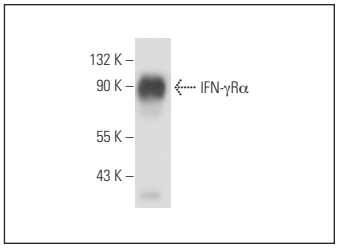
Molecular Weight of IFN-γRα: 80-95 kDa.

Positive Controls: BYDP whole cell lysate: sc-364368, RAW 264.7 whole cell lysate: sc-2211 or WEHI-231 whole cell lysate: sc-2213.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



IFN-γRα (F-6): sc-74450. Western blot analysis of IFN-γRα expression in BYDP whole cell lysate.

SELECT PRODUCT CITATIONS

1. Lv, C., et al. 2021. Down-regulation of the IFN-γ receptorexpression endows resistance to anti-PD-1 therapy in colorectal cancer. J. Pharmacol. Exp. Ther. 376: 21-28.

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.