SANTA CRUZ BIOTECHNOLOGY, INC.

IFN-γRβ (Q-20): sc-973

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. 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: Ifngr2 (mouse) mapping to 16 C3.3.

SOURCE

IFN-γRβ (Q-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the N-terminus of IFN-γRβ 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.

Blocking peptide available for competition studies, sc-973 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

IFN-γRβ (Q-20) is recommended for detection of IFN-γRβ of mouse and rat origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for IFN-γRβ siRNA (m): sc-35635, IFN-γRβ shRNA Plasmid (m): sc-35635-SH and IFN-γRβ shRNA (m) Lentiviral Particles: sc-35635-V.

Molecular Weight of IFN-γRβ: 38 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Haring, J.S., et al. 2005. Dynamic regulation of IFN-γ signaling in antigen-specific $CD8^+$ T cells responding to infection. J. Immunol. 174: 6791-6802.
2. Mazzieri, R., et al. 2007. A direct link between expression of urokinase plasminogen activator receptor, growth rate and oncogenic transformation in mouse embryonic fibroblasts. Oncogene 26: 725-732.
3. Chentouf, M., et al. 2011. Excessive food intake, obesity and inflammation process in Zucker fa/fa rat pancreatic islets. PLoS ONE 6: e22954.
4. Li, Y., et al. 2013. Epigenetic silencing of microRNA-193a contributes to leukemogenesis in t(8;21) acute myeloid leukemia by activating the PTEN/PI3K signal pathway. Blood 121: 499-509.

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.