

# IFN- $\gamma$ R $\beta$ (M-20): sc-972

## BACKGROUND

IFN- $\gamma$  induces a variety of biological responses, such as antiviral, antiproliferative and immunomodulatory activity in sensitive cells. Activation of the IFN- $\gamma$  receptor (IFN- $\gamma$ R) leads to autophosphorylation of the Janus kinases JAK1 and JAK2, and the nuclear translocation of the transcription factors Stat1 $\alpha$  p91 and Stat1 $\beta$  p84. The IFN- $\gamma$ R is composed of at least two chains, designated IFN- $\gamma$ R $\alpha$  and IFN- $\gamma$ R $\beta$ , respectively. Although expression of IFN- $\gamma$ R $\alpha$  is sufficient for ligand binding, it alone does not confer responsiveness to IFN- $\gamma$ . Concomitant expression of IFN- $\gamma$ R $\alpha$  and IFN- $\gamma$ R $\beta$  is required for transcriptional activation of IFN- $\gamma$ -inducible genes. The IFN- $\gamma$ R $\beta$  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- $\gamma$ R.

## CHROMOSOMAL LOCATION

Genetic locus: IFNGR2 (human) mapping to 21q22.11; Ifngr2 (mouse) mapping to 16 C3.3.

## SOURCE

IFN- $\gamma$ R $\beta$  (M-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of IFN- $\gamma$ R $\beta$  of mouse origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-972 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## 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.

## APPLICATIONS

IFN- $\gamma$ R $\beta$  (M-20) is recommended for detection of IFN- $\gamma$ R $\beta$  of mouse, rat and, to a lesser extent, human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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- $\gamma$ R $\beta$  siRNA (m): sc-35635, IFN- $\gamma$ R $\beta$  siRNA (h): sc-40094, IFN- $\gamma$ R $\beta$  shRNA Plasmid (m): sc-35635-SH, IFN- $\gamma$ R $\beta$  shRNA Plasmid (h): sc-40094-SH, IFN- $\gamma$ R $\beta$  shRNA (m) Lentiviral Particles: sc-35635-V and IFN- $\gamma$ R $\beta$  shRNA (h) Lentiviral Particles: sc-40094-V.

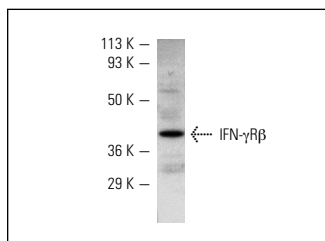
Molecular Weight of IFN- $\gamma$ R $\beta$ : 38 kDa.

Positive Controls: rat PBL whole cell lysate.

## 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## DATA



IFN- $\gamma$ R $\beta$  (H-20): sc-972. Western blot analysis of IFN- $\gamma$ R $\beta$  expression in rat PBL whole cell lysate.

## SELECT PRODUCT CITATIONS

- Lundkvist, G.B., et al. 1998. Expression of an oscillating interferon- $\gamma$  receptor in the suprachiasmatic nuclei. *NeuroReport* 9: 1059-1063.
- Kanzaki, M., et al. 1998. Identification and regulation of testicular interferon- $\gamma$  (IFN $\gamma$ ) receptor subunits: IFN $\gamma$  enhances interferon regulatory factor-1 and interleukin-1 $\beta$  converting enzyme expression. *Endocrinology* 139: 2636-2644.
- Bisgaard, H., et al. 1999. Modulation of the gene network connected to interferon- $\gamma$  in liver regeneration from oval cells. *Am. J. Pathol.* 155: 1075-1085.
- Luder, C.G., et al. 2001. *Toxoplasma gondii* down-regulates MHC class II gene expression and antigen presentation by murine macrophages via interference with nuclear translocation of STAT1 $\alpha$ . *Eur. J. Immunol.* 31: 1475-1484.
- Le Garrec, Y., et al. 2001. Increased cell surface expression of histocompatibility class II I-A(d) in c-fos transfected clones of the P388D1 murine macrophage cell line. *Eur. Cytokine Netw.* 12: 135-140.

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