

IFN- α / β R β (V-20): sc-20218

BACKGROUND

The type I interferons (IFNs), α and β , are a group of structurally and functionally related proteins that are induced by either viruses or double stranded RNA and defined by their ability to confer an antiviral state in cells. The α and β IFNs appear to compete with one another for binding to a common cell surface receptor while immune IFN (IFN γ) binds to a distinct receptor. The latter protein, IFN- α R, is only weakly responsive to type I interferons in contrast to IFN- α / β R, which binds to and responds effectively to IFN- β and to several of the IFN- α subtypes. Moreover, IFN- α / β R is physically associated with the cytoplasmic tyrosine kinase JAK1 and thus, in addition to ligand binding, appears to be functionally involved in signal transduction. The IFN- γ receptor complex consists of an alpha subunit (IFN- γ R α) and a β subunit that is 332 amino acids in length (mouse) and 337 amino acids (human).

REFERENCES

1. Branca, A.A., et al. 1981. Evidence that type I and II interferons have different receptors. *Nature* 294: 768-770.
2. Orchansky, P., et al. 1984. Type I and type II interferon receptors. *J. Interferon Res.* 4: 275-282.
3. Novick, D., et al. 1987. The human interferon- γ receptor, purification, characterization and preparation of antibodies. *J. Biol. Chem.* 262: 8483-8487.
4. Aguet, M., et al. 1988. Molecular cloning and expression of the human interferon- γ receptor. *Cell* 55: 273-280.
5. Novick, D., et al. 1994. The human interferon α / β receptor: characterization and molecular cloning. *Cell* 77: 391-400.
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.

CHROMOSOMAL LOCATION

Genetic locus: IFNAR2 (human) mapping to 21q22.1; Ifnar2 (mouse) mapping to 16 C3.3.

SOURCE

IFN- α / β R β (V-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of IFN- α / β R β of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-20218 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

IFN- α / β R β (V-20) is recommended for detection of IFN- α / β R β soluble and long forms of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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- α / β R β siRNA (m): sc-40092, IFN- α / β R β shRNA Plasmid (m): sc-40092-SH and IFN- α / β R β shRNA (m) Lentiviral Particles: sc-40092-V.

Molecular Weight of soluble IFN- α subunit: 110 kDa.

Molecular Weight of IFN- β subunit: 95-100 kDa.

Molecular Weight of IFN- β subunit short form: 55 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

STORAGE

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

PROTOCOLS

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



Try **IFN- α / β R β (F-7): sc-137209**, our highly recommended monoclonal alternative to IFN- α / β R β (V-20).