

IFN- α / β R α (C-18): sc-706

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 α subunit (IFN- γ R α) and a β subunit that is 332 amino acids in length (mouse) and 337 amino acids in length (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. 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.
6. 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.
7. Novick, D., et al. 1994. The human interferon- α / β receptor: characterization and molecular cloning. *Cell* 77: 391-400.

CHROMOSOMAL LOCATION

Genetic locus: *Ifnar1* (mouse) mapping to 16 C3.3.

SOURCE

IFN- α / β R α (C-18) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of IFN- α / β R α 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-706 P, (100 μ 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.

APPLICATIONS

IFN- α / β R α (C-18) is recommended for detection of IFN- α / β R α chain of mouse and rat origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], 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- α / β R α siRNA (m): sc-40090, IFN- α / β R α shRNA Plasmid (m): sc-40090-SH and IFN- α / β R α shRNA (m) Lentiviral Particles: sc-40090-V.

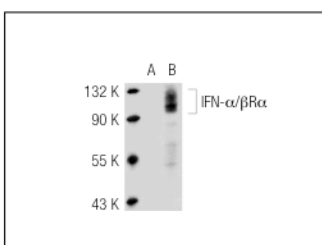
Molecular Weight of IFN- α / β R α : 60 kDa.

Positive Controls: IFN- α / β R α (m): 293T Lysate: sc-120957.

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- α / β R α (C-18): sc-706. Western blot analysis of IFN- α / β R α expression in non-transfected: sc-117752 (A) and mouse IFN- α / β R α transfected: sc-120957 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Plataniias, L.C., et al. 1996. Differences in interferon α and β signaling. Interferon β selectively induces the interaction of the α and β subunits of the type I interferon receptor. *J. Biol. Chem.* 271: 23630-23633.
2. Alvarez Mde, L., et al. 2009. Cross-talk between IFN- α and TGF- β 1 signaling pathways in preneoplastic rat liver. *Growth Factors* 27: 1-11.

RESEARCH USE

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