

IFN- α / β R α (Δ -457): sc-4092 WB

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 (γ) binds to a distinct receptor. Components of the receptor for IFN α and β include a 331 amino acid transmembrane glycoprotein, designated IFN- α / β R and a 557 amino acid component designated IFN- α R. 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 beta subunit that is 332 amino acids in length (mouse) and 337 amino acids (human).

REFERENCES

1. Branca, A.A. and Baglioni, C. 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. Uzé, G., et al. 1990. Genetic transfer of a functional human interferon α receptor into mouse cells: cloning and expression of its cDNA. *Cell* 60: 225-234.
6. Novick, D., et al. 1994. The human interferon α / β receptor: characterization and molecular cloning. *Cell* 77: 391-400.
7. Constantinescu, S.N., et al. 1994. Role of interferon α / β receptor chain 1 in the structure and transmembrane signaling of the interferon α / β receptor complex. *Proc. Natl. Acad. Sci. USA* 91: 9602-9606.
8. 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.
9. 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.

SOURCE

IFN- α / β R α (Δ -457) is expressed in *E. coli* as a 50 kDa tagged fusion protein corresponding to amino acids 458-557 of the intracellular domain of IFN- α R of human origin.

STORAGE

Store at -20° C; stable for one year from the date of shipment.

PRODUCT

IFN- α / β R α (D-457) is purified from bacterial lysates (>98%) by glutathione agarose affinity chromatography; supplied as 10 μ g in 0.1 ml SDS-PAGE loading buffer.

APPLICATIONS

IFN- α / β R α (D-457) is suitable as a Western blotting control for sc-845 and sc-7391.

RESEARCH USE

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