SANTA CRUZ BIOTECHNOLOGY, INC.

IFN-α/βRα (h): 293T Lysate: sc-113922

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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-αR, is only weakly responsive to type I interferons in contrast to IFN-α/βR, which binds to, and responds effectively, to IFN-β and to several of the IFN-α subtypes. Moreover, IFN-α/βR 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-γRα) and a β subunit that is 332 amino acids long in mouse and 337 amino acids long in 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., Novick, D., Fischer, D.G. and Rubinstein, M. 1984. Type I and type II interferon receptors. J. Interferon Res. 4: 275-282.
3. Novick, D., Orchansky, P., Revel, M. and Rubinstein, M. 1987. The human interferon-γ receptor, purification, characterization and preparation of antibodies. J. Biol. Chem. 262: 8483-8487.
4. Aguet, M., Dembic, Z. and Merlin, G. 1988. Molecular cloning and expression of the human interferon-γ receptor. Cell 55: 273-280.
5. Soh, J., Donnelly, R.J., Kotenko, S., Mariano, T.M., Cook, J.R., Wang, N., Emanuel, S., Schwartz, B., Miki, T. and Pestka, S. 1994. Identification and sequence of an accessory factor required for activation of the human interferon-γ receptor. Cell 76: 793-802.
6. Hemmi, S., Böhni, R., Stark, G., Di Marco, F. and Aguet, M. 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., Cohen, B. and Rubinstein, M. 1994. The human interferon-α/β receptor: characterization and molecular cloning. Cell 77: 391-400.

CHROMOSOMAL LOCATION

Genetic locus: IFNAR1 (human) mapping to 21q22.11.

PRODUCT

IFN-α/βRα (h): 293T Lysate represents a lysate of human IFN-α/βRα transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

APPLICATIONS

IFN-α/βRα (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive IFN-α/βRα antibodies.Recommended use: 10-20 µl per lane.

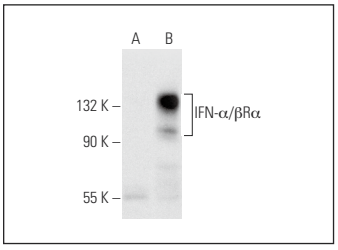
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-tranfected 293T cells.

IFN-α/βRα (H-11): sc-7391 is recommended as a positive control antibody for Western Blot analysis of enhanced human IFN-α/βRα expression in IFN-α/βRα transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

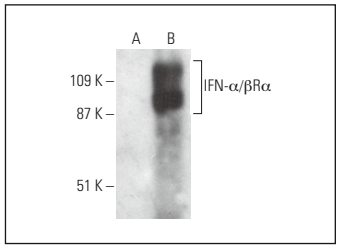
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



IFN-α/βRα (H-11): sc-7391. Western blot analysis of IFN-α/βRα expression in non-transfected: sc-117752 (**A**) and human IFN-α/βRα transfected: sc-113922 (**B**) 293T whole cell lysates.



IFN-α/βRα (H-11) HRP: sc-7391 HRP. Direct western blot analysis of IFN-α/βRα expression in non-transfected: sc-117752 (**A**) and human IFN-α/βRα transfected: sc-113922 (**B**) 293T whole cell lysates.

RESEARCH USE

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