SANTA CRUZ BIOTECHNOLOGY, INC.

IFN-αR1 (MAR1-1H5): sc-53590

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. IFN-αR1 is a receptor for IFN-α/β and is present as the full chain (IFN-αR1a) and as a splice-variant (IFN-αR1). The IFN-γ receptor complex consists of an α subunit (IFN-γRα) 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-αR1 (MAR1-1H5) is a mouse monoclonal antibody raised against the extracellular domain of IFN-αR1 of mouse origin.

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 for detailed protocols and support products.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available azide-free for neutralizing, sc-53590 L, 200 µg/0.1 ml.

IFN-αR1 (MAR1-1H5) is available conjugated to either phycoerythrin (sc-53590 PE) or fluorescein (sc-53590 FITC), 200 µg/ml, for IF, IHC(P) and FCM.

APPLICATIONS

IFN-αR1 (MAR1-1H5) is recommended for detection of IFN-αR1 of mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and flow cytometry (1 µg per 1 x 10^6 cells).

Suitable for use as control antibody for IFN-α/βRα siRNA (m): sc-40090, IFN-α/βRα shRNA Plasmid (m): sc-40090-SH and IFN-α/βRα shRNA (m) Lentiviral Particles: sc-40090-V.

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, 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).

RESEARCH USE

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