SANTA CRUZ BIOTECHNOLOGY, INC.

IFN-α/βRβ (G-4): sc-376273

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The type I interferons, IFN-α and IFN-β, are a group of structurally and functionally related proteins that are induced by either viruses or double-stranded RNA and are defined by their ability to confer an antiviral state in cells. IFN-α and IFN-β appear to compete with one another for binding to a common cell surface receptor, while immune IFN (IFN-γ) binds to a distinct receptor. This distinct receptor, 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. IFN-α/βR is expressed as two alternatively spliced transcripts, designated IFN-α/βRα (IFN-α/βR1) and IFN-α/βRβ (IFN-α/βR2), both of which are involved in signal transduction and ligand binding.

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.

CHROMOSOMAL LOCATION

Genetic locus: IFNAR2 (human) mapping to 21q22.11.

SOURCE

IFN-α/βRβ (G-4) s a mouse monoclonal antibody specific for an epitope mapping between amino acids 79-109 within an extracellular domain of IFN-α/βRβ of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

IFN-α/βRβ (G-4) is available conjugated to agarose (sc-376273 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-376273 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376273 PE), fluorescein (sc-376273 FITC), Alexa Fluor® 488 (sc-376273 AF488), Alexa Fluor® 546 (sc-376273 AF546), Alexa Fluor® 594 (sc-376273 AF594) or Alexa Fluor® 647 (sc-376273 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376273 AF680) or Alexa Fluor® 790 (sc-376273 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-376273 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

IFN-α/βRβ (G-4) is recommended for detection of IFN-α/βRβ of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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/βRβ siRNA (h): sc-40091, IFN-α/βRβ shRNA Plasmid (h): sc-40091-SH and IFN-α/βRβ shRNA (h) Lentiviral Particles: sc-40091-V.

Molecular Weight of IFN-α subunit: 110 kDa.

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

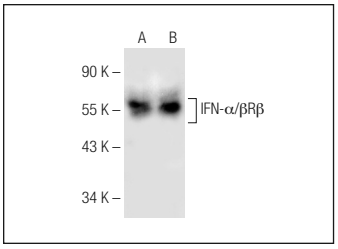
Molecular Weight of IFN-β subunit short form: 55 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, Hep G2 cell lysate: sc-2227 or Caco-2 cell lysate: sc-2262.

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



IFN-α/βRβ (G-4): sc-376273. Western blot analysis of IFN-α/βRβ expression in Caco-2 (**A**) and Hep G2 (**B**) whole cell lysates.

STORAGE

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

RESEARCH USE

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