SANTA CRUZ BIOTECHNOLOGY, INC.

IFN-α/βRβ (C-18): sc-704

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.

CHROMOSOMAL LOCATION

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

SOURCE

IFN-α/βRβ (C-18) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of IFN-α/βRβ of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-704 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

IFN-α/βRβ (C-18) is recommended for detection of IFN-α/βRβ chain of human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunoprecipitation [1-2 µg per 100-500 µg 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/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.

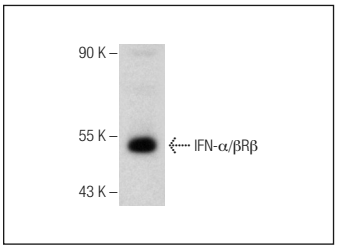
Molecular Weight of IFN-β subunit short form: 55 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, K-562 whole cell lysate: sc-2203 or Hep G2 cell lysate: sc-2227.

STORAGE

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

DATA



IFN-α/βRβ (C-18): sc-704. Western blot analysis of IFN-α/βRβ expression in K-562 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Micouin, A., et al. 2000. p95Vav associates with the type I interferon (IFN) receptor and contributes to the antiproliferative effect of IFN-α in megakaryocytic cell lines. Oncogene 19: 387-394.
2. Komatsu, T., et al. 2000. Sendai virus blocks alpha interferon signaling to signal transducers and activators of transcription. J. Virol. 74: 2477-2480.
3. Gotoh B, et al. 2003. The STAT2 activation process is a crucial target of Sendai virus C protein for the blockade of alpha interferon signaling. J. Virol. 77: 3360-3370.
4. Shi, L., et al. 2007. Inhibition of Jak1-dependent signal transduction in airway epithelial cells infected with adenovirus. Am. J. Respir. Cell Mol. Biol. 37: 720-728.
5. Krämer, O.H. and Heinzel, T. 2010. Phosphorylation-acetylation switch in the regulation of STAT1 signaling. Mol. Cell. Endocrinol. 315: 40-48.

RESEARCH USE

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

PROTOCOLS

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