SANTA CRUZ BIOTECHNOLOGY, INC.

IL-10R (3F9): sc-53654

BACKGROUND

The IL-10 receptor, IL-10R, is a member of the class II subgroup of the cytokine receptor family and exhibits structural similarity to the interferon receptor. IL-10R is expressed in B cells and T helper cells, as well as in LPS-induced mouse fibroblasts. Overall, mouse IL-10R and human IL-10R share 60% sequence identity at the protein level. Stimulation with IL-10 leads to phosphorylation of JAK1 and Tyk 2 tyrosine kinases. The activated kinases phosphorylate the two tyrosine residues (Tyr 446 and Tyr 496) in the cytoplasmic domain of IL-10Rα. The phosphorylation of these two residues are required for proper function of IL-10R and activation of IL-10E1 signaling. IL-10Rβ is ubiquitously expressed and, in addition to forming the IL-10 heterodimeric receptor, it forms a heterodimeric receptor with an IL-22R subunit and an IL-28R subunit. IL-10R is constitutively expressed on human natural killer (NK) cells and the direct binding of IL-10 potentiates cytokine production by human NK cells.

REFERENCES

1. Ho, A.S.Y., et al. 1993. A receptor for interleukin-10 is related to interferon receptors. Proc. Natl. Acad. Sci. USA 90: 11267-11271.
2. Weber-Nordt, R.M., et al. 1994. Lipopolysac-charide-dependent induction of IL-10 receptor expression on murine fibroblasts. J. Immunol. 153: 3734-3744.
3. Ho, A.S., et al. 1995. Functional regions of the mouse interleukin-10 receptor cytoplasmic domain. Mol. Cell. Biol. 15: 5043-5053.
4. Tan, J.C., et al. 1995. Characterization of recombinant extracellular domain of human interleukin-10 receptor. J. Biol. Chem. 270: 12906-12911.
5. Carson, W.E., et al. 1995. The functional characterization of interleukin-10 receptor expression on human natural killer cells. Blood 85: 3577-3585.
6. Corinti, S., et al. 2001. Regulatory activity of autocrine IL-10 on dendritic cell functions. J. Immunol. 166: 4312-4318.
7. Vilcek, J. 2002. Novel interferons. Nat. Immunol. 4: 8-9.

CHROMOSOMAL LOCATION

Genetic locus: IL10RB (human) mapping to 21q22.11.

SOURCE

IL-10R (3F9) is a rat monoclonal antibody raised against full length soluble IL-10R of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

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.

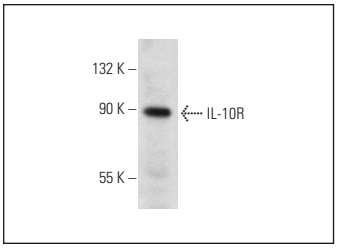
APPLICATIONS

IL-10R (3F9) is recommended for detection of IL-10R of human 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)], flow cytometry (1 µg per 1 x 10^6 cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of IL-10R: 90-110 kDa.

Positive Controls: Ramos cell lysate: sc-2216.

DATA



IL-10R (3F9): sc-53654. Western blot analysis of IL-10R expression in Ramos whole cell lysate.

SELECT PRODUCT CITATIONS

1. Jiang, H., et al. 2011. Regulation of interleukin-10 receptor ubiquitination and stability by β-TrCP-containing ubiquitin E3 ligase. PLoS ONE 6: e27464.
2. Latorre, E., et al. 2013. IL-10 modulates serotonin transporter activity and molecular expression in intestinal epithelial cells. Cytokine 61: 778-784.

PROTOCOLS

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