SANTA CRUZ BIOTECHNOLOGY, INC.

IL-10Rα (M-300): sc-25478

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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., 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. Lipopoly-saccharide-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.
8. Stearns, M.E., et al. 2003. IL-signaling via IL-10E1 is dependent on tyrosine phosphorylation in the IL-10R α chain in human primary prostate cancer cell lines. Oncogene 22: 3781-3791.

CHROMOSOMAL LOCATION

Genetic locus: Il10ra (mouse) mapping to 9 A5.2.

SOURCE

IL-10Rα (M-300) is a rabbit polyclonal antibody raised against amino acids 276-575 of IL-10Rα of mouse origin.

PRODUCT

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

RESEARCH USE

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

APPLICATIONS

IL-10Rα (M-300) is recommended for detection of IL-10Rα of mouse and rat 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)], 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 IL-10Rα siRNA (m): sc-72018, IL-10Rα shRNA Plasmid (m): sc-72018-SH and IL-10Rα shRNA (m) Lentiviral Particles: sc-72018-V.

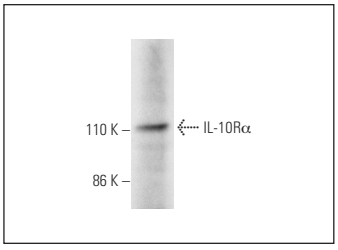
Molecular Weight of IL-10Rα: 90-110 kDa.

Positive Controls: mouse liver extract: sc-2256 or J774.A1 cell lysate: sc-3802.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), 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). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



IL-10Rα (M-300): sc-25478. Western blot analysis of IL-10Rα expression in mouse liver tissue extract.

STORAGE

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