

# IL-10R $\alpha$ (C-20): sc-984

## 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-10R $\alpha$ . The phosphorylation of these two residues are required for proper function of IL-10R and activation of IL-10E1 signaling. IL-10R $\beta$  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.

## CHROMOSOMAL LOCATION

Genetic locus: IL10RA (human) mapping to 11q23.3; Il10ra (mouse) mapping to 9 A5.2.

## SOURCE

IL-10R $\alpha$  (C-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of IL-10R $\alpha$  of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-984 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as phycoerythrin conjugate for flow cytometry, sc-984 PE, 100 tests.

## APPLICATIONS

IL-10R $\alpha$  (C-20) is recommended for detection of IL-10R $\alpha$  of human and, to a lesser extent, mouse and rat origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250), flow cytometry (1  $\mu$ g per 1 x 10<sup>6</sup> cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

IL-10R $\alpha$  (C-20) is also recommended for detection of IL-10R $\alpha$  in additional species, including bovine and porcine.

Suitable for use as control antibody for IL-10R $\alpha$  siRNA (h): sc-35646, IL-10R $\alpha$  siRNA (m): sc-72018, IL-10R $\alpha$  shRNA Plasmid (h): sc-35646-SH, IL-10R $\alpha$  shRNA Plasmid (m): sc-72018-SH, IL-10R $\alpha$  shRNA (h) Lentiviral Particles: sc-35646-V and IL-10R $\alpha$  shRNA (m) Lentiviral Particles: sc-72018-V.

Molecular Weight of IL-10R $\alpha$  (predicted): 63 kDa.

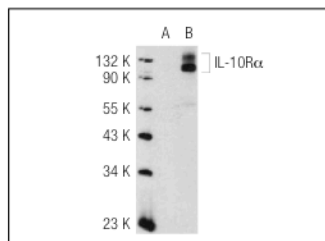
Molecular Weight of glycosylated IL-10R $\alpha$ : 90-110 kDa.

Positive Controls: IL-10R $\alpha$  (h2): 293T Lysate: sc-176031, NAMALWA cell lysate: sc-2234 or CCRF-HSB-2 cell lysate: sc-2265.

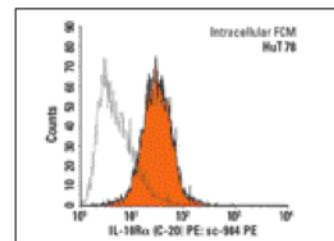
## STORAGE

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

## DATA



IL-10R $\alpha$  (C-20): sc-984. Western blot analysis of IL-10R $\alpha$  expression in non-transfected: sc-117752 (A) and human IL-10R $\alpha$  transfected: sc-176031 (B) 293T whole cell lysates.



IL-10R $\alpha$  (C-20) PE: sc-984 PE. Intracellular FCM analysis of fixed and permeabilized Hut78 cells. Black line histogram represents the isotype control, normal rabbit IgG: sc-3871.

## SELECT PRODUCT CITATIONS

- Zhou, J.H., et al. 2001. IL-10 inhibits apoptosis of promyeloid cells by activating Insulin receptor substrate-2 and phosphatidylinositol 3'-kinase. *J. Immunol.* 167: 4436-4442.
- Mentlein, R., et al. 2001. Topology of the signal transduction of the G protein-coupled somatostatin receptor sst2 in human glioma cells. *Cell Tissue Res.* 303: 27-34.
- Ledeboer, A., et al. 2003. Regional and temporal expression patterns of interleukin-10, interleukin-10 receptor and adhesion molecules in the rat spinal cord during chronic relapsing EAE. *J. Immunol.* 136: 94-103.
- Todaro, M., et al. 2006. Autocrine production of interleukin-4 and interleukin-10 is required for survival and growth of thyroid cancer cells. *Cancer Res.* 66: 1491-1499.
- Kis, L.L., et al. 2006. IL-10 can induce the expression of EBV-encoded latent membrane protein-1 (LMP-1) in the absence of EBNA-2 in B lymphocytes and in Burkitt lymphoma- and NK lymphoma-derived cell lines. *Blood* 107: 2928-2935.
- Lajoie, P., et al. 2009. Caveolin-1 regulation of dynamin-dependent, raft-mediated endocytosis of cholera toxin  $\beta$ -subunit occurs independently of caveolae. *J. Cell. Mol. Med.* E-published.
- Francipane, M.G., et al. 2009. Suppressor of cytokine signaling 3 sensitizes anaplastic thyroid cancer to standard chemotherapy. *Cancer Res.* 69: 6141-6148.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.