

# IL-10R $\beta$ (E-1): sc-390370

## 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.

## 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. 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-10 signaling via IL-10E1 is dependent on tyrosine phosphorylation in the IL-10R $\alpha$  chain in human primary prostate cancer cell lines. *Oncogene* 22: 3781-3791.
9. Sheikh, F., et al. 2004. Cutting edge: IL-26 signals through a novel receptor complex composed of IL-20 receptor 1 and IL-10 receptor 2. *J. Immunol.* 172: 2006-2010.

## CHROMOSOMAL LOCATION

Genetic locus: Il10rb (mouse) mapping to 16 C3.3.

## SOURCE

IL-10R $\beta$  (E-1) is a mouse monoclonal antibody raised against amino acids 94-194 mapping within an internal region of IL-10R $\beta$  of mouse origin.

## PRODUCT

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

## APPLICATIONS

IL-10R $\beta$  (E-1) is recommended for detection of IL-10R $\beta$  of mouse origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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-10R $\beta$  siRNA (m): sc-75332, IL-10R $\beta$  shRNA Plasmid (m): sc-75332-SH and IL-10R $\beta$  shRNA (m) Lentiviral Particles: sc-75332-V.

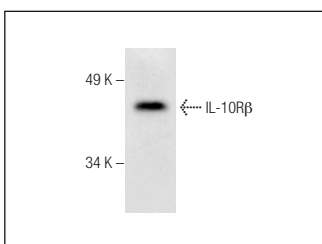
Molecular Weight of IL-10R $\beta$ : 37 kDa.

Positive Controls: BYDP whole cell lysate: sc-364368.

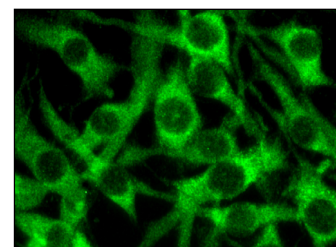
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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 L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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



IL-10R $\beta$  (E-1): sc-390370. Western blot analysis of IL-10R $\beta$  expression in BYDP whole cell lysate.



IL-10R $\beta$  (E-1): sc-390370. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS

1. Jia, Y., et al. 2016. IL24 and its receptors regulate growth and migration of pancreatic cancer cells and are potential biomarkers for IL24 molecular therapy. *Anticancer Res.* 36: 1153-1163.

## 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.