

IL-10R α (E-6): sc-28371

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 α . The phosphorylation of these two residues are required for proper function of IL-10R and activation of IL-10E1 signaling. IL-10R β 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

- 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.
- Weber-Nordt, R.M., et al. 1994. Lipopoly-saccharide-dependent induction of IL-10 receptor expression on murine fibroblasts. *J. Immunol.* 153: 3734-3744.

CHROMOSOMAL LOCATION

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

SOURCE

IL-10R α (E-6) is a mouse monoclonal antibody raised against amino acids 276-575 of IL-10R α of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

IL-10R α (E-6) is available conjugated to agarose (sc-28371 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-28371 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-28371 PE), fluorescein (sc-28371 FITC), Alexa Fluor[®] 488 (sc-28371 AF488), Alexa Fluor[®] 546 (sc-28371 AF546), Alexa Fluor[®] 594 (sc-28371 AF594) or Alexa Fluor[®] 647 (sc-28371 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-28371 AF680) or Alexa Fluor[®] 790 (sc-28371 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor[®] is a trademark of Molecular Probes, Inc., Oregon, USA

STORAGE

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

PROTOCOLS

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

APPLICATIONS

IL-10R α (E-6) is recommended for detection of IL-10R α of mouse origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:500), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 α siRNA (m): sc-72018, IL-10R α shRNA Plasmid (m): sc-72018-SH and IL-10R α shRNA (m) Lentiviral Particles: sc-72018-V.

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

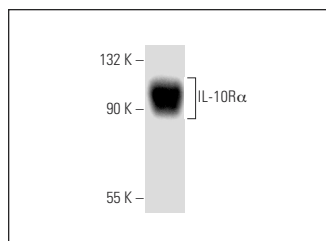
Molecular Weight of IL-10R α : 63 kDa.

Positive Controls: J774.A1 cell lysate: sc-3802.

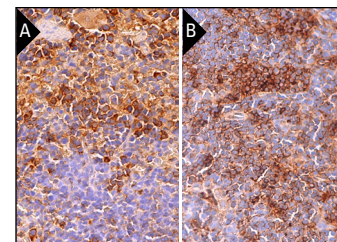
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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 A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



IL-10R α (E-6): sc-28371. Western blot analysis of IL-10R α expression in J774.A1 whole cell lysate.



IL-10R α (E-6): sc-28371. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse spleen tissue showing membrane and cytoplasmic staining of cells in red pulp (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse lymph node tissue showing membrane and cytoplasmic staining of cells in non-germinal center (B).

SELECT PRODUCT CITATIONS

- Sun, Q., et al. 2022. IRG1/itaconate increases IL-10 release to alleviate mechanical and thermal hypersensitivity in mice after nerve injury. *Front. Immunol.* 13: 1012442.

RESEARCH USE

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