## SANTA CRUZ BIOTECHNOLOGY, INC.

# IL-10Rα (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 $\alpha$ . 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: II10ra (mouse) mapping to 9 A5.2.

## SOURCE

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

## PRODUCT

Each vial contains 200  $\mu$ g lgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

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

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## **APPLICATIONS**

IL-10R $\alpha$  (E-6) is recommended for detection of IL-10R $\alpha$  of mouse origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:500), 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), 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 $\alpha$  siRNA (m): sc-72018, IL-10R $\alpha$  shRNA Plasmid (m): sc-72018-SH and IL-10R $\alpha$  shRNA (m) Lentiviral Particles: sc-72018-V.

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

Molecular Weight of IL-10Ra: 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-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

#### DATA





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

IL-10Ra (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.
- Inyang, K.E., et al. 2024. Upregulation of δ opioid receptor by meningeal interleukin-10 prevents relapsing pain. Brain Behav. Immun. 123: 399-410.
- 3. de Souza, S., et al. 2024. Interleukin-10 signaling in somatosensory neurons controls CCL2 release and inflammatory response. Brain Behav. Immun. 116: 193-202.

#### **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.

## PROTOCOLS

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