SANTA CRUZ BIOTECHNOLOGY, INC.

IL-10Rα (A-3): sc-365374

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.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.

CHROMOSOMAL LOCATION

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

SOURCE

IL-10Rα (A-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 551-578 at the C-terminus of IL-10Rα of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

IL-10Rα (A-3) is available conjugated to agarose (sc-365374 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-365374 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365374 PE), fluorescein (sc-365374 FITC), Alexa Fluor® 488 (sc-365374 AF488), Alexa Fluor® 546 (sc-365374 AF546), Alexa Fluor® 594 (sc-365374 AF594) or Alexa Fluor® 647 (sc-365374 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365374 AF680) or Alexa Fluor® 790 (sc-365374 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-365374 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

IL-10Rα (A-3) is recommended for detection of IL-10Rα of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

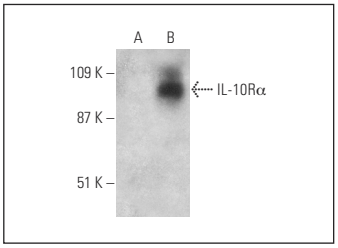
Suitable for use as control antibody for IL-10Rα siRNA (h): sc-35646, IL-10Rα siRNA (m): sc-72018, IL-10Rα shRNA Plasmid (h): sc-35646-SH, IL-10Rα shRNA Plasmid (m): sc-72018-SH, IL-10Rα shRNA (h) Lentiviral Particles: sc-35646-V and IL-10Rα shRNA (m) Lentiviral Particles: sc-72018-V.

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

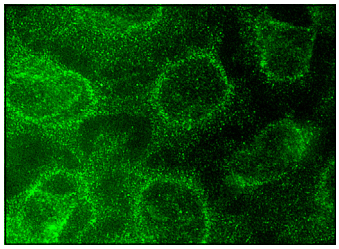
Molecular Weight of IL-10Rα: 63 kDa.

Positive Controls: IL-10Rα (h): 293T Lysate : sc-114689.

DATA



IL-10Rα (A-3) HRP: sc-365374 HRP. Direct western blot analysis of IL-10Rα expression in non-transfected: sc-117752 (**A**) and human IL-10Rα transfected: sc-114689 (**B**) 293 whole cell lysates.



IL-10Rα (A-3): sc-365374. Immunofluorescence staining of methanol-fixed HeLa 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.
2. Shi, J., et al. 2021. IL-10 alleviates lipopolysaccharide-induced skin scarring via IL-10R/Stat3 axis regulating TLR4/NFκB pathway in dermal fibroblasts. J. Cell. Mol. Med. 25: 1554-1567.
3. Kang, C., et al. 2022. Dapsone Azo-linked with two mesalazine moieties is a "Me-Better" alternative to sulfasalazine. Pharmaceutics 14: 684.
4. Kim, J., et al. 2023. N-succinylaspartic-acid-conjugated riluzole is a safe and potent colon-targeted prodrug of riluzole against DNBS-induced rat colitis. Pharmaceutics 15: 2638.
5. Li, X., et al. 2024. Immune cells promote BDNF expression by infiltrated macrophages via interleukin 4 in the cerebral ischemia of male rats. J. Neurosci. Res. 102: e25379.

RESEARCH USE

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