SANTA CRUZ BIOTECHNOLOGY, INC.

# IL-23 (C-3): sc-271279

## BACKGROUND

The p19 protein shares sequence similarity with IL-6 subfamily members and is distantly related to the p35 subunit of IL-12. p19 shows no biological activity by itself; instead, it combines with the p40 subunit of IL-12 to form a biologically active, composite cytokine, IL-23. IL-23 shares some *in vivo* functions with IL-12, including the activation of the transcription factor Stat4. Indeed, the receptors for each appear to share one subunit, but also have at least one distinct subunit. Activated dendritic cells secrete detectable levels of this heterodimeric complex and IL-23 binds to IL-12R β1 but fails to engage IL-12R β2. Similar to IL-12, human IL-23 stimulates IFN-γ production and proliferation in PHA blast T cells, as well as in CD45RO (memory) T cells. Ubiquitous transgenic expression of the IL-23 subunit p19 induces multiorgan inflammation, runting, infertility and premature death. The gene which encodes IL-23 maps to human chromosome 12q13.3.

## CHROMOSOMAL LOCATION

Genetic locus: IL23A (human) mapping to 12q13.3; Il23a (mouse) mapping to 10 D3.

## SOURCE

IL-23 (C-3) is a mouse monoclonal antibody raised against amino acids 75-187 mapping near the C-terminus of IL-23 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-23 (C-3) is available conjugated to agarose (sc-271279 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271279 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271279 PE), fluorescein (sc-271279 FITC), Alexa Fluor® 488 (sc-271279 AF488), Alexa Fluor® 546 (sc-271279 AF546), Alexa Fluor® 594 (sc-271279 AF594) or Alexa Fluor® 647 (sc-271279 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271279 AF680) or Alexa Fluor® 790 (sc-271279 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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

## APPLICATIONS

IL-23 (C-3) is recommended for detection of IL-23 α subunit p19 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-23 siRNA (h): sc-43860, IL-23 siRNA (m): sc-60028, IL-23 shRNA Plasmid (h): sc-43860-SH, IL-23 shRNA Plasmid (m): sc-60028-SH, IL-23 shRNA (h) Lentiviral Particles: sc-43860-V and IL-23 shRNA (m) Lentiviral Particles: sc-60028-V.

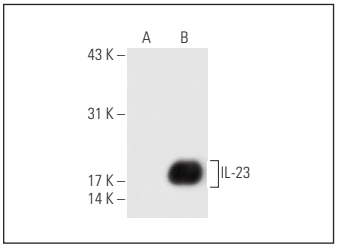
Molecular Weight of IL-23 p19 subunit: 19 kDa.

Positive Controls: IL-23 (m): 293T Lysate: sc-121044.

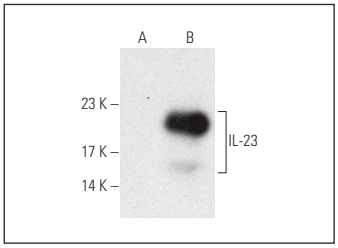
## STORAGE

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

## DATA




IL-23 (C-3): sc-271279. Western blot analysis of IL-23 expression in non-transfected: sc-117752 (**A**) and mouse IL-23 transfected: sc-121044 (**B**) 293T whole cell lysates.




IL-23 (C-3): sc-271279. Western blot analysis of IL-23 expression in non-transfected: sc-117752 (**A**) and mouse IL-23 transfected: sc-121044 (**B**) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS


1. Xue, Z.W., et al. 2013. Effects of Shenshao decoction on the inflammatory response in the aorta of a rat atherosclerotic model. Chin. J. Integr. Med. 19: 347-352.
2. Shin, G.C., et al. 2019. PRKCSH contributes to tumorigenesis by selective boosting of IRE1 signaling pathway. Nat. Commun. 10: 3185.
3. Lim, K.S., et al. 2020. Inflammatory and mitogenic signals drive interleukin 23 subunit α (IL23A) secretion independent of IL12B in intestinal epithelial cells. J. Biol. Chem. 295: 6387-6400.
4. Ji, J., et al. 2021. IL-23 enhances C-fiber-mediated and blue light-induced spontaneous pain in female mice. Front. Immunol. 12: 787565.
5. Yamaguchi, R., et al. 2022. IL-23 production in human macrophages is regulated negatively by tumor necrosis factor α-induced protein 3 and positively by specificity protein 1 after stimulation of the Toll-like receptor 7/8 signaling pathway. Heliyon 8: e08887.
6. Qin, B.F., et al. 2023. Regulation of Nur77-TLR4/MyD88 signaling pathway is required for ginsenoside Rc ameliorates hepatic fibrosis regression by deactivating hepatic stellate cells. Acta Histochem. 125: 152079.
7. Song, J., et al. 2024. Regulation of the Nur77-P2X7r signaling pathway by nodakenin: a potential protective function against alcoholic liver disease. Molecules 29: 1078.
8. Qin, B.F., et al. 2024. Specnuezhenide ameliorates hepatic fibrosis via regulating SIRT6-mediated inflammatory signaling cascades. J. Ethnopharmacol. 335: 118646.
9. Song, J., et al. 2024. Albiflorin ameliorates thioacetamide-induced hepatic fibrosis: the involvement of NURR1-mediated inflammatory signaling cascades in hepatic stellate cells activation. Ecotoxicol. Environ. Saf. 276: 116334.


## RESEARCH USE

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