SANTA CRUZ BIOTECHNOLOGY, INC.

IL-1α (C-18): sc-1253

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Two forms of interleukin-1, designated IL-1α and IL-1β, have been described. Although encoded by distinct genes and exhibiting roughly only 25% sequence identity, IL-1α and IL-1β bind to the same receptor and seem to elicit similar biological responses. IL-1 production is generally thought to be associated with inflammation, but it has also been shown to be expressed during kidney development, thymocyte differentiation and cartilage degradation. IL-1 plays a critical role in the regulation of immune response and inflammation, acting as an activator of T and B lymphocytes and natural killer (NK) cells. In T cells, IL-1 stimulates the production of IL-2 and selectively inhibits IL-4 expression. IL-1 induces B cell proliferation and maturation, and immunoglobulin synthesis. NK cells require IL-1β for production of the anti- pathogen IFN-γ. IL-1 has also been implicated in several pathological conditions including rheumatoid arthritis, inflammatory bowel disease and atherosclerosis.

REFERENCES

1. Auron, P.E., et al. 1985. Nucleotide sequence of human monocyte interleukin-1 precursor cDNA. Proc. Natl. Acad. Sci. USA 81: 7907-7911.
2. March, C.J., et al. 1985. Cloning, sequence and expression of two distinct human interleukin-1 complementary DNAs. Nature 315: 641-647.

CHROMOSOMAL LOCATION

Genetic locus: Il1a (mouse) mapping to 2 F1.

SOURCE

IL-1α (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of IL-1α of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-1253 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

IL-1α (C-18) is recommended for detection of IL-1α of mouse and rat origin by Western Blotting (starting dilution 1:200, 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-1α siRNA (m): sc-39614, IL-1α shRNA Plasmid (m): sc-39614-SH and IL-1α shRNA (m) Lentiviral Particles: sc-39614-V.

Molecular Weight of IL-1 : 33/17 kDa.

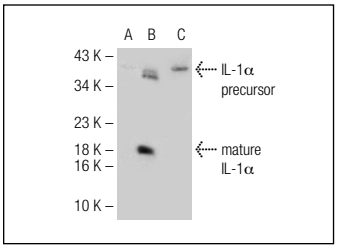
STORAGE

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

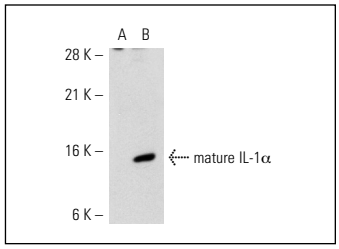
RESEARCH USE

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

DATA



IL-1α (C-18): sc-1253. Western blot analysis of IL-1α expression in non-transfected 293T: sc-117752 (**A**), human IL-1α transfected 293T: sc-176714 (**B**) and HeLa (**C**) whole cell lysates.



IL-1α (C-18): sc-1253. Western blot analysis of IL-1α expression in non-transfected: sc-110760 (**A**) and human IL-1α transfected: sc-111172 (**B**) 293 whole cell lysates.

SELECT PRODUCT CITATIONS

1. Kurtzman, S.H., et al. 1998. Cytokines in human breast cancer: IL-1α and IL-1β expression. Oncol. Rep. 6: 65-70.
2. Miller, L.J., et al. 2000. Interleukin-1 family expression in human breast cancer: interleukin-1 receptor antagonist. Cancer Invest. 275: 293-302.
3. Brown, R.E., et al. 2003. Mesenchymal chondrosarcoma: molecular characterization by a proteomic approach, with morphogenic and therapeutic implications. Ann. Clin. Lab. Sci. 33: 131-141.
4. Ku, C.C., et al. 2004. Varicella-zoster virus transfer to skin by T Cells and modulation of viral replication by epidermal cell interferon-α. J. Exp. Med. 200: 917-925.
5. Zhang, F., et al. 2010. IL-17A stimulates the expression of inflammatory cytokines via celecoxib-blocked prostaglandin in MC3T3-E1 cells. Arch. Oral Biol. 55: 679-688.
6. Günther, J., et al. 2011. Comparative kinetics of *Escherichia coli*- and *Staphylococcus aureus*-specific activation of key immune pathways in mammary epithelial cells demonstrates that *S. aureus* elicits a delayed response dominated by interleukin-6 (IL-6) but not by IL-1A or tumor necrosis factor α. Infect. Immun. 79: 695-707.
7. Pretheeban, T., et al. 2011. Comparison of expression levels of candidate genes in endometrium of dairy heifers and lactating dairy cows. Can. J. Anim. Sci. 91: 255-264.

MONOS Satisfaction Guaranteed

Try **IL-1α (ALF-161): sc-12741**, our highly recommended monoclonal alternative to IL-1α (C-18). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **IL-1α (ALF-161): sc-12741**.