

# IL-1 $\alpha$ (5G3): sc-130325

## BACKGROUND

Two forms of interleukin-1, designated IL-1 $\alpha$  and IL-1 $\beta$ , have been described. Although encoded by distinct genes and exhibiting roughly only 25% sequence identity, IL-1 $\alpha$  and IL-1 $\beta$  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-1 $\beta$  for production of the anti-pathogen IFN- $\gamma$ . 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.
3. Dinarello, C.A. 1991. Interleukin-1 and interleukin-1 antagonism. Blood 77: 1627-1652.
4. Sadouk, M.B., et al. 1995. Human synovial fibroblasts coexpress IL-1 receptor type I and type II mRNA. The increased level of the IL-1 receptor in osteoarthritic cells is related to an increased level of the type I receptor. Lab. Invest. 73: 347-355.
5. Lonnemann, G., et al. 1995. Cytokines in human renal interstitial fibrosis. I. Interleukin-1 is a paracrine growth factor for cultured fibrosis-derived kidney fibroblasts. Kidney Int. 47: 837-844.
6. Zúñiga-Pflücker, J.C., et al. 1995. Requirement for TNF $\alpha$  and IL-1 $\alpha$  in fetal thymocyte commitment and differentiation. Science 268: 1906-1909.
7. Sandborg, C.I., et al. 1995. IL-4 expression in human T cells is selectively inhibited by IL-1 $\alpha$  and IL-1 $\beta$ . J. Immunol. 155: 5206-5212.

## CHROMOSOMAL LOCATION

Genetic locus: IL1A (human) mapping to 2q13.

## SOURCE

IL-1 $\alpha$  (5G3) is a mouse monoclonal antibody raised against recombinant IL-1 $\alpha$  of human origin.

## PRODUCT

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

## STORAGE

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

## APPLICATIONS

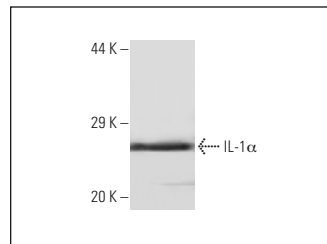
IL-1 $\alpha$  (5G3) is recommended for detection of IL-1 $\alpha$  of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for IL-1 $\alpha$  siRNA (h): sc-39613, IL-1 $\alpha$  shRNA Plasmid (h): sc-39613-SH and IL-1 $\alpha$  shRNA (h) Lentiviral Particles: sc-39613-V.

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

Positive Controls: HeLa whole cell lysate: sc-2200.

## DATA



IL-1 $\alpha$  (5G3): sc-130325. Western blot analysis of human recombinant IL-1 $\alpha$ .

## SELECT PRODUCT CITATIONS


1. Kliman, H.J., et al. 2012. Placental protein 13 and decidual zones of necrosis: an immunologic diversion that may be linked to preeclampsia. Reprod. Sci. 19: 16-30.
2. Jiang, X., et al. 2020. Low-dose aspirin treatment attenuates male rat salt-sensitive hypertension via platelet cyclooxygenase 1 and complement cascade pathway. J. Am. Heart Assoc. 9: e013470.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.



See **IL-1 $\alpha$  (ALF-161): sc-12741** for IL-1 $\alpha$  antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.