SANTA CRUZ BIOTECHNOLOGY, INC.

IL-1α (5G3): sc-130325



BACKGROUND

Two forms of interleukin-1, designated IL-1 α and IL-1 β , have been described. Although encoded by distinct genes and exhibiting roughly only 25% sequence identity, IL-1 α and IL-1 β 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 β 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

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- 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.
- 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.
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 I. Interleukin-1 is a paracrine growth factor for cultured fibrosis-derived kidney fibroblasts. Kidney Int. 47: 837-844.
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- 7. Sandborg, C.I., et al. 1995. IL-4 expression in human T cells is selectively inhibited by IL-1 α and IL-1 β . J. Immunol. 155: 5206-5212.

CHROMOSOMAL LOCATION

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

SOURCE

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

PRODUCT

Each vial contains 200 $\mu g~lgG_1$ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, **D0 NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

IL-1 α (5G3) is recommended for detection of IL-1 α of human 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

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

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

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

DATA



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

SELECT PRODUCT CITATIONS

- 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. Yang, Y., et al. 2018. The development of salt-sensitive hypertension regulated by PSGL-1 gene in mice. Cell Biosci. 8: 20.
- 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 for detailed protocols and support products.



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