SANTA CRUZ BIOTECHNOLOGY, INC.

IL-1ra (AS17): sc-52775

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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. Both proteins are synthesized as precursors that are processed to mature polypeptides. 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 receptor antagonist (IL-1ra) is a cytokine that inhibits IL-1α and IL-1β binding to interleukin receptors.

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. Carter, D.B., et al. 1990. Purification, cloning, expression and biological characterization of an interleukin-1 receptor antagonist protein. Nature 344: 633-638.
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 Intl. 47: 837-844.
6. Zuniga-Pflucker, J.C., et al. 1995. Requirement for TNFα and IL-1α 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-1α and IL-1β. J. Immunol. 155: 5206-5212.

CHROMOSOMAL LOCATION

Genetic locus: IL1RN (human) mapping to 2q13.

SOURCE

IL-1ra (AS17) is a mouse monoclonal antibody raised against full length IL-1ra of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

IL-1ra (AS17) is available conjugated fluorescein (sc-52775 FITC, 100 tests in 2 ml), for IF, IHC(P) and FCM.

APPLICATIONS

IL-1ra (AS17) is recommended for detection of IL-1ra of human origin by flow cytometry (1 µg per 1 x 10^6 cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for IL-1ra siRNA (h): sc-39617, IL-1ra shRNA Plasmid (h): sc-39617-SH and IL-1ra shRNA (h) Lentiviral Particles: sc-39617-V.

Molecular Weight of IL-1ra: 17-25 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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.