

IL-1ra (N-19): sc-8479

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. IL-1 receptor antagonist (IL-1ra) is a cytokine that inhibits IL-1 α and IL-1 β binding to interleukin receptors. By neutralizing the activity of IL-1, IL-1ra contributes to the inhibition of the immune and inflammatory responses and has been targeted as a drug for the treatment of severely active rheumatoid arthritis. There are four isoforms of IL-1ra that are produced as a result of alternative splicing events.

REFERENCES

1. Auron, P.E., et al. 1984. 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. 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.

CHROMOSOMAL LOCATION

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

SOURCE

IL-1ra (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of IL-1ra of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-8479 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

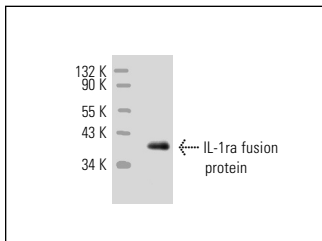
IL-1ra (N-19) is recommended for detection of IL-1ra isoforms of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for IL-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.

Positive Controls: IL-1ra (m): 293T Lysate: sc-127004, A-431 whole cell lysate: sc-2201 or THP-1 cell lysate: sc-2238.

DATA



IL-1ra (N-19): sc-8479. Western blot analysis of human recombinant IL-1ra fusion protein.

SELECT PRODUCT CITATIONS

1. Ricote, M., et al. 2004. Interleukin-1 (IL-1 α and IL-1 β) and its receptors (IL-1RI, IL-1RII, and IL-1ra) in prostate carcinoma. Cancer 100: 1388-1396.
2. Nuñez, C., et al. 2008. TNF/IL-1/NIK/NF κ B transduction pathway: a comparative study in normal and pathological human prostate (benign hyperplasia and carcinoma). Histopathology 53: 166-176.
3. Bouraoui, Y., et al. 2008. Pro-inflammatory cytokines and prostate-specific antigen in hyperplasia and human prostate cancer. Cancer Detect. Prev. 32: 23-32.
4. Aksentjevich, I., et al. 2009. An autoinflammatory disease with deficiency of the interleukin-1-receptor antagonist. N. Engl. J. Med. 360: 2426-2437.

RESEARCH USE

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


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Try **IL-1ra (A-4): sc-374084** or **IL-1ra (A-11): sc-376094**, our highly recommended monoclonal alternatives to IL-1ra (N-19).