

IL-1ra (M-20): sc-8482

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

- Auron, P.E., et al. 1984. Nucleotide sequence of human monocyte interleukin-1 precursor cDNA. Proc. Natl. Acad. Sci. USA 81: 7907-7911.
- 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: IL1RN (human) mapping to 2q13; Il1rn (mouse) mapping to 2 A3.

SOURCE

IL-1ra (M-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of IL-1ra of mouse 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-8482 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

IL-1ra (M-20) is recommended for detection of IL-1ra of mouse, rat and, to a lesser extent, 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 siRNA (m): sc-39618, IL-1ra shRNA Plasmid (h): sc-39617-SH, IL-1ra shRNA Plasmid (m): sc-39618-SH, IL-1ra shRNA (h) Lentiviral Particles: sc-39617-V and IL-1ra shRNA (m) Lentiviral Particles: sc-39618-V.

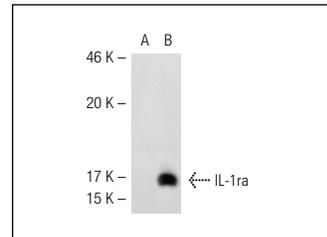
Molecular Weight of IL-1ra: 17-25 kDa.

Positive Controls: IL-1ra (m): 293T Lysate: sc-127004.

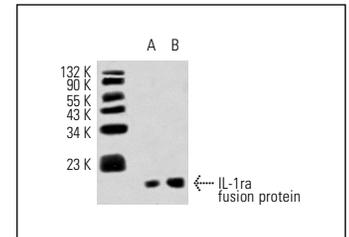
STORAGE

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

DATA



IL-1ra (M-20): sc-8482. Western blot analysis of IL-1ra expression in non-transfected: sc-117752 (A) and mouse IL-1ra transfected: sc-127004 (B) 293T whole cell lysates.



IL-1ra (M-20): sc-8482. Western blot analysis of human (A) and mouse (B) recombinant IL-1ra.

SELECT PRODUCT CITATIONS

- Uekawa, N., et al. 2004. Involvement of IL-1 family proteins in p38 linked cellular senescence of mouse embryonic fibroblasts. FEBS Lett. 575: 30-34.
- Briancon, N., et al. 2006. *In vivo* role of the HNF-4 α AF-1 activation domain revealed by exon swapping. EMBO J. 25: 1253-1262.
- Choi, J.S., et al. 2008. Effects of estrogen on temporal expressions of IL-1 β and IL-1ra in rat organotypic hippocampal slices exposed to oxygen-glucose deprivation. Neurosci. Lett. 438: 233-237.
- Na, H.Y., et al. 2009. TLR4-independent and PKR-dependent interleukin 1 receptor antagonist expression upon LPS stimulation. Cell. Immunol. 259: 33-40.
- Buler, M., et al. 2012. Energy-sensing factors coactivator peroxisome proliferator-activated receptor γ coactivator 1- α (PGC-1 α) and AMP-activated protein kinase control expression of inflammatory mediators in liver: induction of interleukin 1 receptor antagonist. J. Biol. Chem. 287: 1847-1860.
- Chhor, V., et al. 2013. Characterization of phenotype markers and neurotoxic potential of polarised primary microglia *in vitro*. Brain Behav. Immun. 32: 70-85.

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 (M-20).