

IL-1 β (C-20): sc-1250

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.

CHROMOSOMAL LOCATION

Genetic locus: IL1B (human) mapping to 2q13.

SOURCE

IL-1 β (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of IL-1 β 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-1250 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

IL-1 β (C-20) is recommended for detection of IL-1 β 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-1 β siRNA (h): sc-39615, IL-1 β shRNA Plasmid (h): sc-39615-SH and IL-1 β shRNA (h) Lentiviral Particles: sc-39615-V.

Molecular Weight of IL-1 β precursor: 31 kDa.

Molecular Weight of mature IL-1 β : 17 kDa.

Positive Controls: IL-1 β (h): 293T Lysate: sc-176712, BJAB whole cell lysate: sc-2207 or SK-N-SH cell lysate: sc-2410.

RESEARCH USE

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

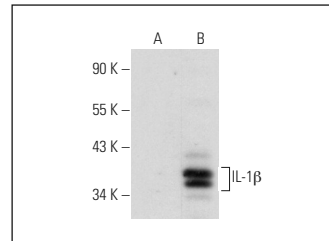
PROTOCOLS

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

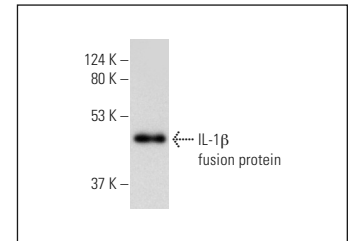
STORAGE

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

DATA



IL-1 β (C-20): sc-1250. Western blot analysis of IL-1 β expression in non-transfected: sc-117752 (A) and human IL-1 β transfected: sc-176712 (B) 293T whole cell lysates.



IL-1 β (C-20): sc-1250. Western blot analysis of human recombinant IL-1 β fusion protein.

SELECT PRODUCT CITATIONS

- Kurtzman, S.H., et al. 1998. Cytokines in human breast cancer: IL-1 α and IL-1 β expression. *Oncol. Rep.* 6: 65-70.
- Denis, M.M., et al. 2005. Escaping the nuclear confines: signal-dependent pre-mRNA splicing in anucleate platelets. *Cell* 122: 379-391.
- Boer, K., et al. 2008. Inflammatory processes in cortical tubers and subependymal giant cell tumors of tuberous sclerosis complex. *Epilepsy Res.* 78: 7-21.
- Culicchia, F., et al. 2008. Upregulation of β -amyloid precursor protein expression in glioblastoma multiforme. *Neuroreport* 19: 981-985.
- Hill, J.M., et al. 2009. HSV-1 infection of human brain cells induces miRNA-146a and Alzheimer-type inflammatory signaling. *Neuroreport* 20: 1500-1505.
- Cutolo, M., et al. 2009. CTLA4-Ig interacts with cultured synovial macrophages from rheumatoid arthritis patients and downregulates cytokine production. *Arthritis Res. Ther.* 11: R176.
- Iyer, A., et al. 2010. Evaluation of the innate and adaptive immunity in type I and type II focal cortical dysplasias. *Epilepsia* 51: 1763-1773.
- Brizzolara, R., et al. 2011. CTLA4-Ig interferes and downregulates the proinflammatory activities of rheumatoid synovial macrophages in monoculture. *Reumatismo* 63: 80-85.
- Villaggio, B., et al. 2012. 1,25-dihydroxyvitamin D₃ downregulates aromatase expression and inflammatory cytokines in human macrophages. *Clin. Exp. Rheumatol.* 30: 934-938.


 MONOS
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