

IL-1 β (R-20): sc-1252

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 (mouse) mapping to 2 F1.

SOURCE

IL-1 β (R-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of IL-1 β of rat 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-1252 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

IL-1 β (R-20) is recommended for detection of IL-1 β of mouse and rat 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 (m): sc-39616, IL-1 β siRNA (r): sc-45995, IL-1 β shRNA Plasmid (m): sc-39616-SH, IL-1 β shRNA Plasmid (r): sc-45995-SH, IL-1 β shRNA (m) Lentiviral Particles: sc-39616-V and IL-1 β shRNA (r) Lentiviral Particles: sc-45995-V.

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

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

STORAGE

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

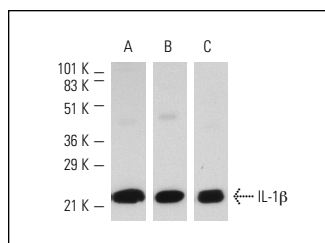
PROTOCOLS

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

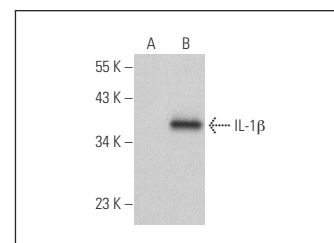
RESEARCH USE

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

DATA



Western blot analysis of human recombinant IL-1 β (A) and mouse recombinant IL-1 β (B, C). Antibodies tested include IL-1 β (C-20): sc-1250 (A), IL-1 β (M-20): sc-1251 (B) and IL-1 β (R-20): sc-1252 (C).



IL-1 β (R-20): sc-1252. 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.

SELECT PRODUCT CITATIONS

1. Acarin, L., et al. 2000. Neuronal, astroglial and microglial cytokine expression after an excitotoxic lesion in the immature rat brain. *Eur. J. Neurosci.* 12: 3505-3520.
2. Xu, H., et al. 2011. Cataract surgery induces retinal pro-inflammatory gene expression and protein secretion. *Invest. Ophthalmol. Vis. Sci.* 52: 249-255.
3. Villar-Cheda, B., et al. 2012. Aging-related changes in the nigral angiotensin system enhances proinflammatory and pro-oxidative markers and 6-OHDA-induced dopaminergic degeneration. *Neurobiol. Aging* 33: e1-e11.
4. Rodriguez-Perez, A.I., et al. 2012. Dopaminergic degeneration is enhanced by chronic brain hypoperfusion and inhibited by angiotensin receptor blockage. *Age (Dordr.)* 35: 1675-1690.
5. Rodriguez-Perez, A.I., et al. 2012. Dopaminergic neuroprotection of hormonal replacement therapy in young and aged menopausal rats: role of the brain angiotensin system. *Brain* 135: 124-138.
6. Engelmann, J., et al. 2012. Pulsed ultrasound and dimethylsulfoxide gel treatment reduces the expression of pro-inflammatory molecules in an animal model of muscle injury. *Ultrasound Med. Biol.* 38: 1470-1475.
7. Zhou, X., et al. 2015. Transient receptor potential channel 1 deficiency impairs host defense and proinflammatory responses to bacterial infection by regulating protein kinase C α signaling. *Mol. Cell. Biol.* 35: 2729-2739.
8. Oliveira, V., et al. 2015. Diets containing α -linolenic (ω 3) or oleic (ω 9) fatty acids rescues obese mice from Insulin resistance. *Endocrinology* 156: 4033-4046.

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