

IL-1 β (11E5): sc-52012

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 2q14.1; IL1b (mouse) mapping to 2 F1.

SOURCE

IL-1 β (11E5) is a mouse monoclonal antibody raised against recombinant IL-1 β of human origin.

PRODUCT

Each vial contains 100 μ g IgG₁ in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

IL-1 β (11E5) is recommended for detection of IL-1 β of mouse, rat and 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for IL-1 β siRNA (h): sc-39615, IL-1 β siRNA (m): sc-39616, IL-1 β shRNA Plasmid (h): sc-39615-SH, IL-1 β shRNA Plasmid (m): sc-39616-SH, IL-1 β shRNA (h) Lentiviral Particles: sc-39615-V and IL-1 β shRNA (m) Lentiviral Particles: sc-39616-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): 293 Lysate: sc-111184, SK-N-SH cell lysate: sc-2410 or BJAB whole cell lysate: sc-2207.

STORAGE

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

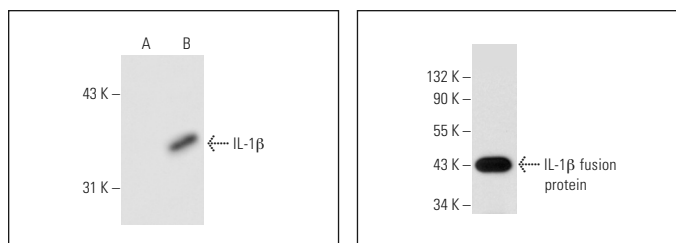
PROTOCOLS

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

RESEARCH USE

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

DATA



IL-1 β (11E5): sc-52012. Western blot analysis of IL-1 β expression in non-transfected: sc-110760 (A) and human IL-1 β transfected: sc-111184 (B) 293 whole cell lysates.

IL-1 β (11E5): sc-52012. Western blot analysis of human IL-1 β fusion protein.

SELECT PRODUCT CITATIONS

- Kalpana, S., et al. 2008. Cobalt chloride attenuates hypobaric hypoxia induced vascular leakage in rat brain: molecular mechanisms of action of cobalt chloride. *Toxicol. Appl. Pharmacol.* 231: 354-363.
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- Hadi, T., et al. 2017. β 3 adrenergic receptor stimulation in human macrophages inhibits NADPH oxidase activity and induces catalase expression via PPAR γ activation. *Biochim. Biophys. Acta* 1864: 1769-1784.
- Yang, C., et al. 2018. Hepatoprotective effect of methyl ferulic acid against carbon tetrachloride-induced acute liver injury in rats. *Exp. Ther. Med.* 15: 2228-2238.
- Wang, Y., et al. 2019. miR-27a suppresses TLR4-induced renal ischemia-reperfusion injury. *Mol. Med. Rep.* 20: 967-976.
- Bagati, A., et al. 2020. Novel combination therapy for melanoma induces apoptosis via a gap junction positive feedback mechanism. *Oncotarget* 11: 3443-3458.
- Cao, Z., et al. 2021. HBP1-mediated transcriptional repression of AFP inhibits hepatoma progression. *J. Exp. Clin. Cancer Res.* 40: 118.
- Wang, L.B., et al. 2022. Silencing the Tlr4 gene alleviates methamphetamine-induced hepatotoxicity by inhibiting lipopolysaccharide-mediated inflammation in mice. *Int. J. Mol. Sci.* 23: 6810.
- Liu, X., et al. 2023. Resurrection of endogenous retroviruses during aging reinforces senescence. *Cell* 186: 287-304.e26.

CONJUGATES

See **IL-1 β (E7-2-hIL β): sc-32294** for IL-1 β antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor[®] 488, 546, 594, 647, 680 and 790.