SANTA CRUZ BIOTECHNOLOGY, INC.

# IL-1β (E7-2-hIL1β): sc-32294

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## BACKGROUND

Two forms of interleukin-1, designated IL-1α and IL-1β, have been described. Although encoded by distinct genes and exhibiting roughly only 25% sequence identity, IL-1α and IL-1β 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-1β 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-1β (E7-2-hIL1β) is a mouse monoclonal antibody raised against recombinant IL-1β of human origin.

## PRODUCT

Each vial contains 200 µg $IgG_{2b}$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

IL-1β (E7-2-hIL1β) is available conjugated to agarose (sc-32294 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-32294 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-32294 PE), fluorescein (sc-32294 FITC), Alexa Fluor® 488 (sc-32294 AF488), Alexa Fluor® 546 (sc-32294 AF546), Alexa Fluor® 594 (sc-32294 AF594) or Alexa Fluor® 647 (sc-32294 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-32294 AF680) or Alexa Fluor® 790 (sc-32294 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.



## APPLICATIONS

IL-1β (E7-2-hIL1β) is recommended for detection of IL-1β of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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-1β siRNA (h): sc-39615, IL-1β shRNA Plasmid (h): sc-39615-SH and IL-1β shRNA (h) Lentiviral Particles: sc-39615-V.

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

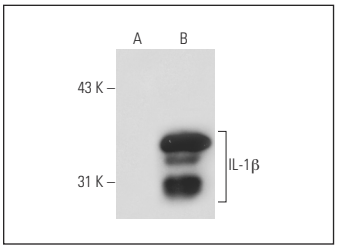
Molecular Weight of mature IL-1β: 17 kDa.

Positive Controls: SK-N-SH cell lysate: sc-2410, IL-1β (h): 293 Lysate: sc-111184 or BJAB whole cell lysate: sc-2207.

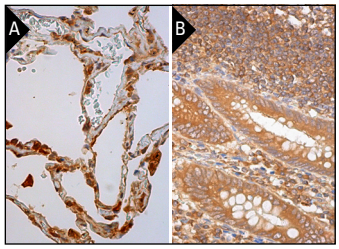
## STORAGE

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

## DATA




IL-1β (E7-2-hIL1β): sc-32294. Western blot analysis of IL-1β expression in non-transfected: sc-110760 (**A**) and human IL-1β transfected: sc-111184 (**B**) 293 whole cell lysates.




IL-1β (E7-2-hIL1β): sc-32294. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lung tissue showing cytoplasmic staining of pneumocytes (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human appendix tissue showing cytoplasmic staining of glandular cells and lymphoid cells (**B**).

## SELECT PRODUCT CITATIONS


3. Zhang, X., et al. 2017. Resveratrol attenuates early brain injury after experimental subarachnoid hemorrhage via inhibition of NLRP3 inflammasome activation. Front. Neurosci. 11: 611.
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6. Ikram, M., et al. 2019. Hesperetin confers neuroprotection by regulating Nrf2/TLR4/NFκB signaling in an Aβ mouse model. Mol. Neurobiol. 56: 6293-6309.
7. Colombo, G., et al. 2020. Neutralization of extracellular NAMPT (nicotinamide phosphoribosyltransferase) ameliorates experimental murine colitis. J. Mol. Med. 98: 595-612.
8. Riviere, E., et al. 2020. Melatonin daily oral supplementation attenuates inflammation and oxidative stress in testes of men with altered spermatogenesis of unknown aetiology. Mol. Cell. Endocrinol. 515: 110889.
9. Farajdokht, F., et al. 2020. The role of hippocampal $GABA_A$ receptors on anxiolytic effects of *Echium amoenum* extract in a mice model of restraint stress. Mol. Biol. Rep. 47: 6487-6496.
8. Saeed, K., et al. 2020. Quinovic acid impedes cholesterol dyshomeostasis, oxidative stress, and neurodegeneration in an Amyloid-β-induced mouse model. Oxid. Med. Cell. Longev. 2020: 9523758.


## RESEARCH USE

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