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.

REFERENCES


CHROMOSOMAL LOCATION

Genetic locus: IL1B (human) mapping to 2q13; Il1b (mouse) mapping to 2F1.

SOURCE

IL-1β (F-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 238-268 at the C-terminus of IL-1β of rat origin.

PRODUCT

Each vial contains 200 µg IgG2a kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

IL-1β (F-5) is available conjugated to agarose (sc-515598 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515598 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycocerythrin (sc-515598 PE), fluorescein (sc-515598 FITC), Alexa Fluor® 488 (sc-515598 AF488), Alexa Fluor® 546 (sc-515598 AF546), Alexa Fluor® 594 (sc-515598 AF594) or Alexa Fluor® 647 (sc-515598 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515598 AF680) or Alexa Fluor® 790 (sc-515598 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-515598 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA.

STORAGE

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

APPLICATIONS

IL-1β (F-5) is recommended for detection of IL-1β of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for IL-1β siRNA (h): sc-39615, IL-1β siRNA (m): sc-39616, IL-1β siRNA (r): sc-45995, IL-1β shRNA Plasmid (h): sc-39615-SH, IL-1β shRNA Plasmid (m): sc-39616-SH, IL-1β shRNA Plasmid (r): sc-45995-SH, IL-1β shRNA (h) Lentiviral Particles: sc-39615-V, IL-1β shRNA (m) Lentiviral Particles: sc-39616-V and IL-1β shRNA (r) Lentiviral Particles: sc-45995-V.

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

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

Positive Controls: IL-1β (h): 293T Lysate: sc-176712.

DATA

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

SELECT PRODUCT CITATIONS


RESEARCH USE

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

PROTOCOLS

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