

# IL-1 $\alpha$ (3B3): sc-53350

## BACKGROUND

Two forms of interleukin 1, designated IL-1 $\alpha$  and IL-1 $\beta$ , have been described. Although encoded by distinct genes and exhibiting roughly only 25% sequence identity, IL-1 $\alpha$  and IL-1 $\beta$  bind to the same receptor and seem to elicit similar biological responses. Both proteins are synthesized as 31 kDa precursors that are processed to 17 kDa mature polypeptides. 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 $\beta$  for production of the anti-pathogen IFN- $\gamma$ . IL-1 has also been implicated in several pathological conditions including rheumatoid arthritis, inflammatory bowel disease and atherosclerosis.

## REFERENCES

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## STORAGE

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

## CHROMOSOMAL LOCATION

Genetic locus: IL1A (human) mapping to 2q14.

## SOURCE

IL-1 $\alpha$  (3B3) is a mouse monoclonal antibody raised against recombinant human Interleukin 1 $\alpha$ .

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

IL-1 $\alpha$  (3B3) is available conjugated to either phycoerythrin (sc-53350 PE) or fluorescein (sc-53350 FITC), 200  $\mu$ g/ml, for IF, IHC(P) and FCM.

## APPLICATIONS

IL-1 $\alpha$  (3B3) is recommended for detection of IL-1 $\alpha$  of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1  $\mu$ g per 1 x 10<sup>6</sup> cells).

Suitable for use as control antibody for IL-1 $\alpha$  siRNA (h): sc-39613, IL-1 $\alpha$  shRNA Plasmid (h): sc-39613-SH and IL-1 $\alpha$  shRNA (h) Lentiviral Particles: sc-39613-V.

Molecular Weight of IL-1 $\alpha$  precursor: 33 kDa.

Molecular Weight of mature IL-1 $\alpha$ : 17 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotting A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.



See **IL-1 $\alpha$  (ALF-161): sc-12741** for IL-1 $\alpha$  antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647.