SANTA CRUZ BIOTECHNOLOGY, INC.

IL-1α (H-159): sc-7929

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: IL1A (human) mapping to 2q13; Il1a (mouse) mapping to 2 F1.

SOURCE

IL-1α (H-159) is a rabbit polyclonal antibody raised against amino acids 113-271 of IL-1α of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

IL-1α (H-159) is recommended for detection of IL-1α of mouse, rat and 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for IL-1α siRNA (h): sc-39613, IL-1α siRNA (m): sc-39614, IL-1α shRNA Plasmid (h): sc-39613-SH, IL-1α shRNA Plasmid (m): sc-39614-SH, IL-1α shRNA (h) Lentiviral Particles: sc-39613-V and IL-1α shRNA (m) Lentiviral Particles: sc-39614-V.

Molecular Weight of precursor IL-1α: 33/17 kDa.

Positive Controls: IL-1α (h): 293 Lysate: sc-111172 or HeLa whole cell lysate: sc-2200.

STORAGE

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

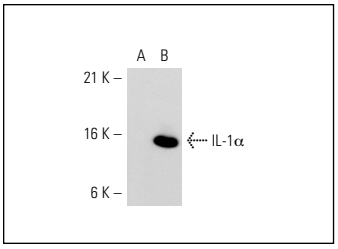
PROTOCOLS

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

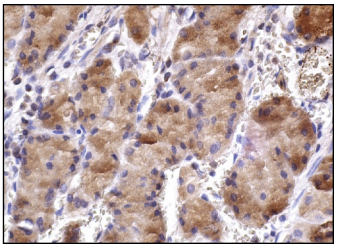
RESEARCH USE

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

DATA



IL-1α (H-159): sc-7929. Western blot analysis of IL-1α expression in non-transfected: sc-110760 (**A**) and human IL-1α transfected: sc-111172 (**B**) 293 whole cell lysates.



IL-1α (H-159): sc-7929. Immunoperoxidase staining of formalin fixed, paraffin-embedded human stomach tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Shamash, S., et al. 2002. The cytokine network of Wallerian degeneration: tumor necrosis factor-α, interleukin-1α, and interleukin-1β. J. Neurosci. 22: 3052-3060.
2. Hurgin, V., et al. 2007. Antiviral and immunoregulatory activities of IFN-γ depend on constitutively expressed IL-1α. Proc. Natl. Acad. Sci. USA 104: 5044-5049.
3. Palmer, G., et al. 2007. Type I IL-1 receptor mediates IL-1 and intracellular IL-1 receptor antagonist effects in skin inflammation. J. Invest. Dermatol. 127: 1938-1946.
4. Nuñez, C., et al. 2008. TNF/IL-1/NIK/NFκB transduction pathway: a comparative study in normal and pathological human prostate (benign hyperplasia and carcinoma). Histopathology 53: 166-176.
5. Bouraoui, Y., et al. 2008. Pro-inflammatory cytokines and prostate-specific antigen in hyperplasia and human prostate cancer. Cancer Detect. Prev. 32: 23-32.
6. Li, R., et al. 2009. Expression of IL-1α, IL-6, TGF-β, FasL and ZNF265 during sertoli cell infection by ureaplasma urealyticum. Cell. Mol. Immunol. 6: 215-221.
7. Behrens, C., et al. 2010. Expression of interleukin-1 receptor-associated kinase-1 in non-small cell lung carcinoma and preneoplastic lesions. Clin. Cancer Res. 16: 34-44.
8. Cansino, J.R., et al. 2011. Prostate specific antigen and NFκB in prostatic disease: relation with malignancy. Actas Urol. Esp. 35: 16-21.