

IL-6 (E-4): sc-28343

BACKGROUND

Interleukin 6, or IL-6, is a multifunctional protein, 212 amino acids in length, that plays critical roles in host defense, immune response, and hematopoiesis. IL-6 is constitutively expressed by epidermal Langerhans cells and its expression is induced in stimulated keratinocytes. IL-6, IL-1 β and TNF α act as endo-genous pyrogens, regulating the fever response to bacterial invasion. The IL-6 receptor is a trimeric complex composed of an IL-6-specific α chain and a homodimer of the gp130 glycoprotein common to the IL-6, IL-11, CNTF, OSM and LIF receptors. Stimulation with IL-6 leads to gp130 homodimerization and the activation of associated kinases JAK1 and JAK2. Once activated, JAK1 and JAK2 phosphorylate Stat3 causing its nuclear translocation and transcription of Stat3-responsive genes. IL-6 has also been shown to activate the Ras/MAP kinase pathway, which regulates NF-IL-6 transcription.

CHROMOSOMAL LOCATION

Genetic locus: IL6 (human) mapping to 7p15.3.

SOURCE

IL-6 (E-4) is a mouse monoclonal antibody raised against amino acids 30-212 of IL-6 of human origin.

PRODUCT

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

IL-6 (E-4) is available conjugated to agarose (sc-28343 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-28343 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-28343 PE), fluorescein (sc-28343 FITC), Alexa Fluor® 488 (sc-28343 AF488), Alexa Fluor® 546 (sc-28343 AF546), Alexa Fluor® 594 (sc-28343 AF594) or Alexa Fluor® 647 (sc-28343 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-28343 AF680) or Alexa Fluor® 790 (sc-28343 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

IL-6 (E-4) is recommended for detection of IL-6 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:10000), 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), immunohistochemistry (including paraffin-embedded sections) (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-6 siRNA (h): sc-39627, IL-6 shRNA Plasmid (h): sc-39627-SH and IL-6 shRNA (h) Lentiviral Particles: sc-39627-V.

Molecular Weight of IL-6: 21 kDa.

Positive Controls: IL-6 (h): 293T Lysate: sc-113126 or HeLa whole cell lysate: sc-2200.

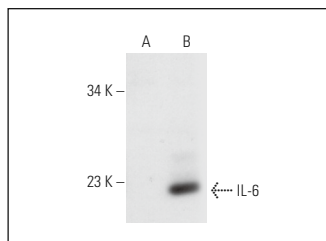
STORAGE

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

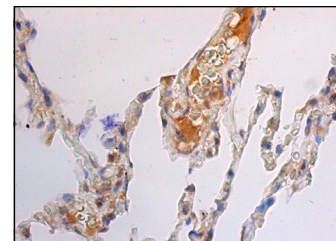
RESEARCH USE

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

DATA



IL-6 (E-4): sc-28343. Western blot analysis of IL-6 expression in non-transfected: sc-117752 (A) and human IL-6 transfected: sc-113126 (B) 293T whole cell lysates.



IL-6 (E-4): sc-28343. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lung tissue showing cytoplasmic staining of macrophages and staining of plasma in blood vessels.

SELECT PRODUCT CITATIONS

- Choi, K.C., et al. 2006. Smad6 negatively regulates interleukin 1-receptor-Toll-like receptor signaling through direct interaction with the adaptor Pellino-1. *Nat. Immunol.* 7: 1057-1065.
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- Song, L., et al. 2014. Inhibition of 12/15 lipoxygenase by baicalein reduces myocardial ischemia/reperfusion injury via modulation of multiple signaling pathways. *Apoptosis* 19: 567-580.
- Schminke, B., et al. 2016. Interleukin 17 inhibits progenitor cells in rheumatoid arthritis cartilage. *Eur. J. Immunol.* 46: 440-445.
- Lu, H., et al. 2017. Role of IL-6-mediated expression of NS5ATP9 in autophagy of liver cancer cells. *J. Cell. Physiol.* 233: 9312-9319.
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- Zeng, J., et al. 2020. Mesenchymal stem/stromal cells-derived IL-6 promotes nasopharyngeal carcinoma growth and resistance to cisplatin via upregulating CD73 expression. *J. Cancer* 11: 2068-2079.
- Dawood, A.F., et al. 2022. Inhibition of glycogen synthase kinase-3 β protects against collagen type II-induced arthritis associated with the inhibition of miR155/24 and inflammation and upregulation of apoptosis in rats. *Arch. Physiol. Biochem.* 128: 679-687.

PROTOCOLS

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

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