

## IL-6 (H-183): sc-7920

### 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 $\beta$  and TNF $\alpha$  act as endogenous pyrogens, regulating the fever response to bacterial invasion. The IL-6 receptor is a trimeric complex composed of an IL-6-specific  $\alpha$  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.

### REFERENCES

1. Hirano, T., et al. 1986. Complementary DNA for a novel human interleukin (BSF-2) that induces B lymphocytes to produce immunoglobulin. *Nature* 324: 73-76.
2. Nakajima, T., et al. 1993. Phosphorylation at threonine-235 by a ras-dependent mitogen-activated protein kinase cascade is essential for transcription factor NF-IL6. *Proc. Natl. Acad. Sci. USA* 90: 2207-2211.

### CHROMOSOMAL LOCATION

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

### SOURCE

IL-6 (H-183) is a rabbit polyclonal antibody raised against amino acids 30-212 of IL-6 of human origin.

### PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

### APPLICATIONS

IL-6 (H-183) is recommended for detection of IL-6 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 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: HeLa whole cell lysate: sc-2200.

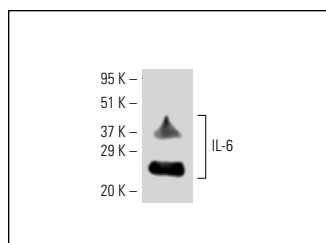
### STORAGE

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 (H-183): sc-7920. Western blot analysis of human recombinant IL-6.

### SELECT PRODUCT CITATIONS

1. Forseni, M., et al. 2001. Detection and localization of interleukin-6 in the rat middle ear during experimental acute otitis media, using mRNA *in situ* hybridization and immunohistochemistry. *Int. J. Pediatr. Otorhinolaryngol.* 57: 115-121.
2. Kakurai, M., et al. 2001. Vasoactive intestinal peptide regulates its receptor expression and functions of human keratinocytes via type I vasoactive intestinal peptide receptors. *J. Invest. Dermatol.* 116: 743-749.
3. Wang, W., et al. 2010. Kallikrein-related peptidase-4 initiates tumor-stroma interactions in prostate cancer through protease-activated receptor-1. *Int. J. Cancer* 126: 599-610.
4. Haugen, F., et al. 2010. IL-7 is expressed and secreted by human skeletal muscle cells. *Am. J. Physiol., Cell Physiol.* 298: C807-C816.
5. Coward, J., et al. 2011. Interleukin-6 as a therapeutic target in human ovarian cancer. *Clin. Cancer Res.* 17: 6083-6096.
6. Chehna-Patel, N., et al. 2011. Proteolytic tailoring of the heat shock protein 70 and its implications in the pathogenesis of endometriosis. *Fertil. Steril.* 95: 1560-1567.
7. Brizzolara, R., et al. 2011. CTLA4-Ig interferes and downregulates the proinflammatory activities of rheumatoid synovial macrophages in monoculture. *Reumatismo* 63: 80-85.
8. Sanchez-Niño, M.D., et al. 2012. Beyond proteinuria: VDR activation reduces renal inflammation in experimental diabetic nephropathy. *Am. J. Physiol. Renal Physiol.* 302: F647-F657.

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