

IL-6 (B-F6): sc-65327

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 endogenous 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.

REFERENCES

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- Nakajima, T., et al. 1993. Phosphorylation at Threonine 235 by a Ras-dependent, mitogen-activated protein kinase cascade is essential for transcription factor NF-IL-6. *Proc. Natl. Acad. Sci. USA* 90: 2207-2211.
- Zhong, Z., et al. 1994. Stat3: A Stat family member activated by tyrosine phosphorylation in response to epidermal growth factor and interleukin-6. *Science* 264: 95-98.
- Wijdenes, J., et al. 1995. Interleukin-6 signal transducer gp130 has specific binding sites for different cytokines as determined by antagonistic and agonistic anti-gp130 monoclonal antibodies. *Eur. J. Immunol.* 25: 3474-3481.
- Wang, Y. and Fuller, G.M. 1995. Interleukin-6 and ciliary neurotrophic factor trigger Janus kinase activation and early gene response in rat hepatocytes. *Gene* 162: 285-289.
- Holliday, M.R., et al. 1996. Stimulation by oxazolone of increased IL-6, but not IL-10, in the skin of mice. *Toxicology* 106: 237-242.
- Chai, Z., et al. 1996. Interleukin (IL)-6 gene expression in the central nervous system is necessary for fever response to lipopolysaccharide or IL-1 β : a study on IL-6-deficient mice. *J. Exp. Med.* 183: 311-316.

CHROMOSOMAL LOCATION

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

SOURCE

IL-6 (B-F6) is a mouse monoclonal antibody raised against recombinant IL-6 of human origin.

PRODUCT

Each vial contains 100 μ g IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

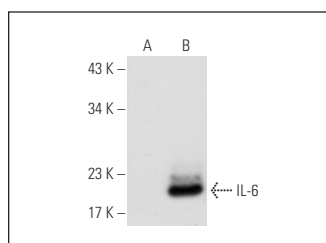
IL-6 (B-F6) is recommended for detection of IL-6 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)].

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.

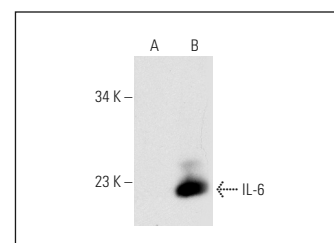
Molecular Weight of IL-6: 21 kDa.

Positive Controls: IL-6 (h2): 293T Lysate: sc-176119 or HeLa whole cell lysate: sc-2200.

DATA



IL-6 (B-F6): sc-65327. Western blot analysis of IL-6 expression in non-transfected: sc-117752 (A) and human IL-6 transfected: sc-176119 (B) 293T whole cell lysates.



IL-6 (B-F6): sc-65327. 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.

SELECT PRODUCT CITATIONS

- Zhong, W., et al. 2018. Increased interleukin-17A levels promote rituximab resistance by suppressing p53 expression and predict an unfavorable prognosis in patients with diffuse large B cell lymphoma. *Int. J. Oncol.* E-published.

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.

PROTOCOLS

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



See **IL-6 (E-4): sc-28343** for IL-6 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor[®] 488, 546, 594, 647, 680 and 790.