

# IL-6 (h2): 293T Lysate: sc-176119

## 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

- 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.
- 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.

## CHROMOSOMAL LOCATION

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

## PRODUCT

IL-6 (h2): 293T Lysate represents a lysate of human IL-6 transfected 293T cells and is provided as 100  $\mu$ g protein in 200  $\mu$ l SDS-PAGE buffer.

## APPLICATIONS

IL-6 (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive IL-6 antibodies. Recommended use: 10-20  $\mu$ l per lane.

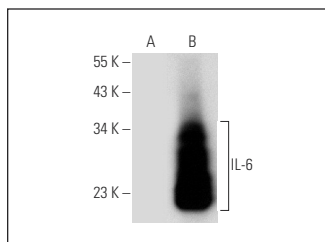
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

IL-6 (1): sc-130326 is recommended as a positive control antibody for Western Blot analysis of enhanced human IL-6 expression in IL-6 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

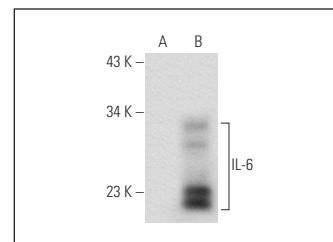
## RECOMMENDED SUPPORT REAGENTS

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, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

## DATA



IL-6 (1): sc-130326. 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 (E-4): sc-28343. 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.

## STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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](http://www.scbt.com) for detailed protocols and support products.