

IL-6 (M-19): sc-1265

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

- 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.
- 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.

CHROMOSOMAL LOCATION

Genetic locus: Il6 (mouse) mapping to 5 B1.

SOURCE

IL-6 (M-19) is available as either goat (sc-1265) or rabbit (sc-1265-R) affinity purified polyclonal antibody raised against a peptide mapping at the C-terminus of IL-6 of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-1265 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

IL-6 (M-19) is recommended for detection of IL-6 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

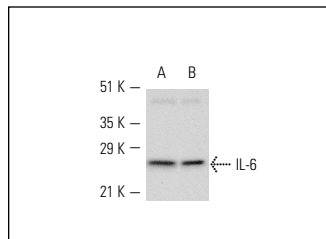
Suitable for use as control antibody for IL-6 siRNA (m): sc-39628, IL-6 shRNA Plasmid (m): sc-39628-SH and IL-6 shRNA (m) Lentiviral Particles: sc-39628-V.

Molecular Weight of IL-6: 21 kDa.

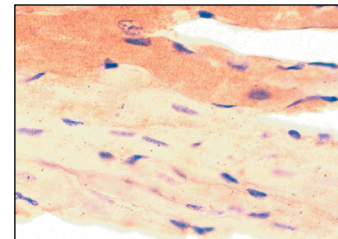
STORAGE

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

DATA



Western blot analysis of mouse recombinant IL-6 (A,B). Antibodies tested include IL-6 (M-19): sc-1265 (A) and IL-6 (R-19): sc-1266 (B).



IL-6 (M-19): sc-1265. Immunoperoxidase staining of formalin-fixed, paraffin-embedded mouse heart showing cytoplasmic and extracellular localization.

SELECT PRODUCT CITATIONS

- Calvi, L.M., et al. 2003. Osteoblastic cells regulate the haematopoietic stem cell niche. *Nature* 425: 841-846.
- Lopez-Dee, Z.P., et al. 2012. Thrombospondin-1 type 1 repeats in a model of inflammatory bowel disease: transcript profile and therapeutic effects. *PLoS ONE* 7: e34590.
- Toblli, J.E., et al. 2012. Effects of iron deficiency anemia and its treatment with iron polymaltose complex in pregnant rats, their fetuses and placentas: oxidative stress markers and pregnancy outcome. *Placenta* 33: 81-87.
- Lam, S.Y., et al. 2012. Chronic intermittent hypoxia induces local inflammation of the rat carotid body via functional upregulation of proinflammatory cytokine pathways. *Histochem. Cell Biol.* 137: 303-317.
- Fernández-Millán, E., et al. 2013. Role of endogenous IL-6 in the neonatal expansion and functionality of Wistar rat pancreatic α cells. *Diabetologia* 56: 1098-1107.
- Kalayarasan, S., et al. 2013. Diallylsulfide attenuates excessive collagen production and apoptosis in a rat model of bleomycin induced pulmonary fibrosis through the involvement of protease activated receptor-2. *Toxicol. Appl. Pharmacol.* 271: 184-195.
- Yilmaz, S., et al. 2013. Mesenchymal stem cell: does it work in an experimental model with acute respiratory distress syndrome? *Stem Cell Rev.* 9: 80-92.

RESEARCH USE

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

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Try **IL-6 (10E5): sc-57315**, our highly recommended monoclonal alternative to IL-6 (M-19).