

# IL-6 (C12-1-hIL-6): sc-32296

## 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.

## CHROMOSOMAL LOCATION

Genetic locus: IL6 (human) mapping to 7p15.3, Il6 (mouse) mapping to 5 B1.

## SOURCE

IL-6 (C12-1-hIL-6) is a mouse monoclonal antibody raised against recombinant IL-6 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

IL-6 (C12-1-hIL-6) is available conjugated to agarose (sc-32296 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-32296 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-32296 PE), fluorescein (sc-32296 FITC), Alexa Fluor® 488 (sc-32296 AF488), Alexa Fluor® 546 (sc-32296 AF546), Alexa Fluor® 594 (sc-32296 AF594) or Alexa Fluor® 647 (sc-32296 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-32296 AF680) or Alexa Fluor® 790 (sc-32296 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

IL-6 (C12-1-hIL-6) is recommended for detection of IL-6 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for IL-6 siRNA (h): sc-39627, IL-6 siRNA (m): sc-39628, IL-6 siRNA (r): sc-156148, IL-6 shRNA Plasmid (h): sc-39627-SH, IL-6 shRNA Plasmid (m): sc-39628-SH, IL-6 shRNA Plasmid (r): sc-156148-SH, IL-6 shRNA (h) Lentiviral Particles: sc-39627-V, IL-6 shRNA (m) Lentiviral Particles: sc-39628-V and IL-6 shRNA (r) Lentiviral Particles: sc-156148-V.

Molecular Weight of IL-6: 21 kDa.

Positive Controls: IL-6 (h): 293T Lysate: sc-113126, Neuro-2A whole cell lysate: sc-364185 or HeLa whole cell lysate: sc-2200.

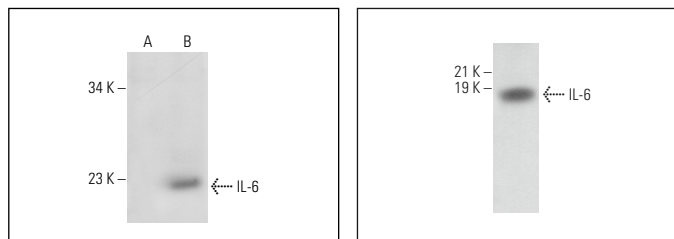
## RESEARCH USE

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

## STORAGE

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

## DATA



IL-6 (C12-1-hIL-6): sc-32296. 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 (C12-1-hIL-6): sc-32296. Western blot analysis of IL-6 expression in Neuro-2A whole cell lysate.

## SELECT PRODUCT CITATIONS

- Bai, J., et al. 2017. Central administration of tert-butylhydroquinone attenuates hypertension via regulating Nrf2 signaling in the hypothalamic paraventricular nucleus of hypertensive rats. *Toxicol. Appl. Pharmacol.* 333: 100-109.
- Zhang, Z., et al. 2018. Oral supplementation with ursolic acid ameliorates sepsis-induced acute kidney injury in a mouse model by inhibiting oxidative stress and inflammatory responses. *Mol. Med. Rep.* 17: 7142-7148.
- Nguyen, G., et al. 2018. Metformin ameliorates activation of hepatic stellate cells and hepatic fibrosis by succinate and GPR91 inhibition. *Biochem. Biophys. Res. Commun.* 495: 2649-2656.
- Lian, J., et al. 2019. Legumain acts on neuroinflammation to affect CUS-induced cognitive impairment. *Behav. Brain Res.* 376: 112219.
- Tang, X.P., et al. 2019. D-limonene protects PC12 cells against corticosterone-induced neurotoxicity by activating the AMPK pathway. *Environ. Toxicol. Pharmacol.* 70: 103192.
- Gao, H., et al. 2020. Omeprazole attenuates cisplatin-induced kidney injury through suppression of the TLR4/NF $\kappa$ B/NLRP3 signaling pathway. *Toxicology* 440: 152487.
- Pan, Y., et al. 2020. Anti-inflammatory effects of Beopje curly dock (*Rumex crispus* L.) in LPS-induced RAW 264.7 cells and its active compounds. *J. Food Biochem.* 44: e13291.
- Alexandre-Santos, B., et al. 2020. Modulation of cardiac renin-angiotensin system, redox status and inflammatory profile by different volumes of aerobic exercise training in obese rats. *Free Radic. Biol. Med.* 156: 125-136.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

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