# SOCS-3 (M-20): sc-7009



The Power to Question

## **BACKGROUND**

The SOCS (suppressor of cytokine signaling) gene family consists of a group of proteins that negatively regulate cytokine signal transduction. The SOCS family proteins contain a central SH2 domain and a carboxy-terminal region termed the "SOCS box". The SOCS-1 (also called SSI-1 and JAB), SOCS-2 (also called SSI-2 and CIS2) and SOC-3 (also called SSI-3 and CIS3) genes are known to be upregulated by IL-6 and other cytokines. SOCS-4, SOCS-5, SOCS-6 and SOCS-7 were identified by their sequence homology with the SOCS box. CIS (for cytokine-inducible SH2-containing protein) is also a member of the SOCS family.

## CHROMOSOMAL LOCATION

Genetic locus: SOCS3 (human) mapping to 17q25.3; Socs3 (mouse) mapping to 11 E2.

#### **SOURCE**

SOCS-3 (M-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of SOCS-3 of mouse origin.

## **PRODUCT**

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

Blocking peptide available for competition studies, sc-7009 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

# **APPLICATIONS**

SOCS-3 (M-20) is recommended for detection of SOCS-3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

SOCS-3 (M-20) is also recommended for detection of SOCS-3 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for SOCS-3 siRNA (h): sc-41000, SOCS-3 siRNA (m): sc-41001, SOCS-3 shRNA Plasmid (h): sc-41000-SH, SOCS-3 shRNA Plasmid (m): sc-41001-SH, SOCS-3 shRNA (h) Lentiviral Particles: sc-41000-V and SOCS-3 shRNA (m) Lentiviral Particles: sc-41001-V.

Molecular Weight of SOCS-3: 30 kDa.

Positive Controls: HeLa + IFN- $\gamma$  cell lysate: sc-2222, A549 cell lysate: sc-2413 or 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.

#### **SELECT PRODUCT CITATIONS**

- Kamura, T., et al. 1998. The Elongin BC complex interacts with the conserved SOCS-box motif present in members of the SOCS, ras, WD-40 repeat, and ankyrin repeat families. Genes Dev. 12: 3872-3881.
- Goren, I., et al. 2006. The suppressor of cytokine signaling-3 is upregulated in impaired skin repair: implications for keratinocyte proliferation. J. Invest. Dermatol. 126: 477-485.
- Chattopadhyay, S., 2007. Interleukin-31 and oncostatin-M mediate distinct signaling reactions and response patterns in lung epithelial cells. J. Biol. Chem. 282: 3014-3026.
- 4. Orr, S.J., 2007. SOCS3 Targets siglec 7 for proteasomal degradation and blocks siglec 7-mediated responses. J. Biol. Chem. 282: 3418-3422.
- Orr, S.J., et al. 2007. CD33 responses are blocked by SOCS3 through accelerated proteasomal-mediated turnover. Blood 109: 1061-1068.
- Wang, X.M., et al. 2007. Rofecoxib modulates multiple gene expression pathways in a clinical model of acute inflammatory pain. Pain 128: 136-147.
- Hale, M.B., et al. 2009. Stage dependent aberrant regulation of cytokine-STAT signaling in murine systemic lupus erythematosus. PLoS ONE 4: e6756.
- Anderson, S.T., et al. 2009. Maximal expression of suppressors of cytokine signaling in the rat ovary occurs in late pregnancy. Reproduction 138: 537-544.
- de la Luz Sierra, M., et al. 2010. The transcription factor Gfi1 regulates G-CSF signaling and neutrophil development through the Ras activator RasGRP1. Blood 115: 3970-3979.
- 10.Leal, R.F., et al. 2010. Activation of signal transducer and activator of transcription-1 (STAT-1) and differential expression of interferon-γ and anti-inflammatory proteins in pelvic ileal pouches for ulcerative colitis and familial adenomatous polyposis. Clin. Exp. Immunol. 160: 380-385.
- 11. Yuan, K., et al. 2011. Elevated inflammatory response in caveolin-1-deficient mice with *Pseudomonas aeruginosa* infection is mediated by STAT3 protein and nuclear factor  $\kappa B$  (NF $\kappa B$ ). J. Biol. Chem. 286: 21814-21825.
- Metlakunta, A.S., et al. 2011. Neuronal suppressor of cytokine signaling-3 deficiency enhances hypothalamic leptin-dependent phosphatidylinositol 3-kinase signaling. Am. J. Physiol. Regul. Integr. Comp. Physiol. 300: R1185-R1193.
- 13. Latorre, E., et al. 2012. Downregulation of HuR as a new mechanism of doxorubicin resistance in breast cancer cells. Mol. Cancer 11: 13.



Try **SOCS-3 (6A463):** sc-**73045**, our highly recommended monoclonal aternative to SOCS-3 (M-20).