

# SOCS-1 (C-20)-R: sc-7005-R

## 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 SOCS-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: SOCS1 (human) mapping to 16p13.13; Socs1 (mouse) mapping to 16 A1.

## SOURCE

SOCS-1 (C-20)-R is an affinity purified rabbit polyclonal antibody raised against a peptide mapping C-terminus (h) of SOCS-1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-7005-R P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

SOCS-1 (C-20)-R is recommended for detection of SOCS-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

SOCS-1 (C-20)-R is also recommended for detection of SOCS-1 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for SOCS-1 siRNA (h): sc-40996, SOCS-1 siRNA (m): sc-40997, SOCS-1 shRNA Plasmid (h): sc-40996-SH, SOCS-1 shRNA Plasmid (m): sc-40997-SH, SOCS-1 shRNA (h) Lentiviral Particles: sc-40996-V and SOCS-1 shRNA (m) Lentiviral Particles: sc-40997-V.

Molecular Weight of SOCS-1: 24 kDa.

Positive Controls: mouse spleen extract: sc-2391 or A549 cell lysate: sc-2413.

## STORAGE

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

## PROTOCOLS

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

## 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.
- Hebenstreit, D., et al. 2003. IL-4 and IL-13 induce SOCS-1 gene expression in A549 cells by three functional Stat6-binding motifs located upstream of the transcription initiation site. *J. Immunol.* 171: 5901-5907.
- Gomez-Guerrero, C., et al. 2004. Suppressors of cytokine signaling regulate Fc receptor signaling and cell activation during immune renal injury. *J. Immunol.* 172: 6969-6977.
- Duran, A., et al. 2004. Crosstalk between PKC $\zeta$  and the IL4/Stat6 pathway during T-cell-mediated hepatitis. *EMBO J.* 23: 4595-4605.
- Cheng, J., et al. 2004. Down-regulation of SHP1 and up-regulation of negative regulators of JAK/STAT signaling in HTLV-1 transformed cell lines and freshly transformed human peripheral blood CD4<sup>+</sup> T-cells. *Leuk. Res.* 28: 71-82.
- Sass, G., et al. 2005. Tumour necrosis factor  $\alpha$  (TNF)-TNF receptor 1-inducible cytoprotective proteins in the mouse liver: relevance of suppressors of cytokine signalling. *Biochem. J.* 385: 537-544.
- Santangelo, C., et al. 2005. Suppressor of cytokine signaling gene expression in human pancreatic islets: modulation by cytokines. *Eur. J. Endocrinol.* 152: 485-489.
- Qiao, X., et al. 2006. Human immunodeficiency virus 1 Nef suppresses CD40-dependent immunoglobulin class switching in bystander B cells. *Nat. Immunol.* 7: 302-310.
- Todayar, M., et al. 2006. Autocrine production of interleukin-4 and interleukin-10 is required for survival and growth of thyroid cancer cells. *Cancer Res.* 66: 1491-1499.
- Sands, W.A., et al. 2006. Exchange protein activated by cyclic AMP (epac)-mediated induction of suppressor of cytokine signaling 3 (SOCS-3) in vascular endothelial cells. *Mol. Cell. Biol.* 26: 6333-6346.
- Joliet, V., et al. 2006. Constitutive Stat5 activation specifically cooperates with the loss of p53 function in B cell lymphomagenesis. *Oncogene* 25: 4573-4584.
- Bergman, B.C., et al. 2009. Intramuscular lipid metabolism in the insulin resistance of smoking. *Diabetes* 58: 2220-2227.
- Ara, T., et al. 2009. Human gingival fibroblasts are critical in sustaining inflammation in periodontal disease. *J. Periodontol Res.* 44: 21-27.
- Venieratos, P.D., et al. 2010. High glucose induces suppression of Insulin signalling and apoptosis via upregulation of endogenous IL-1 $\beta$  and suppressor of cytokine signalling-1 in mouse pancreatic  $\beta$  cells. *Cell. Signal.* 22: 791-800.
- McCartney-Francis, N., et al. 2014. Aberrant host defense against *Leishmania major* in the absence of SLPI. *J. Leukoc. Biol.* 96: 917-929.

## RESEARCH USE

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