

# SOCS-3 (S-19): sc-7010



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 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.

## REFERENCES

1. Yoshimura, A., et al. 1995. A novel cytokine-inducible gene CIS encodes an SH2-containing protein that binds to tyrosine-phosphorylated interleukin-3 and erythropoietin receptors. *EMBO J.* 14: 2816-2826.
2. Matsumoto, A., et al. 1997. CIS, a cytokine inducible SH2 protein, is a target of the JAK/Stat5 pathway and modulates Stat5 activation. *Blood* 89: 3148-3154.

## CHROMOSOMAL LOCATION

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

## SOURCE

SOCS-3 (S-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping to the N-terminus of SOCS-3 of mouse 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-7010 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

SOCS-3 (S-19) 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 (S-19) 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-γ cell lysate: sc-2222, HeLa whole cell lysate: sc-2200 or A549 cell lysate: sc-2413.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## SELECT PRODUCT CITATIONS

1. 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.
2. Campbell, J.S., et al. 2001. Expression of suppressors of cytokine signaling during liver regeneration. *J. Clin. Invest.* 107: 1285-1292.
3. Ling, C., et al. 2001. PRL receptor-mediated effects in female mouse adipocytes: PRL induces suppressors of cytokine signaling expression and suppresses Insulin-induced leptin production in adipocytes *in vitro*. *Endocrinology* 142: 4880-4890.
4. Tonko-Geymayer, S., et al. 2002. Regulation and function of the cytokine-inducible SH2 domain proteins, CIS and SOCS-3, in mammary epithelial cells. *Mol. Endocrinol.* 16: 1680-1695.
5. Hernandez-Vargas, P., et al. 2005. Suppressors of cytokine signaling regulate Angiotensin II-activated Janus kinase-signal transducers and activators of transcription pathway in renal cells. *J. Am. Soc. Nephrol.* 16: 1673-1683.

## 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.

## PROTOCOLS

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

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Try **SOCS-3 (6A463): sc-73045**, our highly recommended monoclonal alternative to SOCS-3 (S-19).