

## SOCS-2 (H-74): sc-9022



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. Starr, R., et al. 1997. A family of cytokine-inducible inhibitors of signalling. *Nature* 387: 917-921.
3. 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: SOCS2 (human) mapping to 12q22; Socs2 (mouse) mapping to 10 C2.

## SOURCE

SOCS-2 (H-74) is a rabbit polyclonal antibody raised against amino acids 89-162 of SOCS-2 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.

## APPLICATIONS

SOCS-2 (H-74) is recommended for detection of SOCS-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

SOCS-2 (H-74) is also recommended for detection of SOCS-2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for SOCS-2 siRNA (h): sc-40998, SOCS-2 siRNA (m): sc-40999, SOCS-2 shRNA Plasmid (h): sc-40998-SH, SOCS-2 shRNA Plasmid (m): sc-40999-SH, SOCS-2 shRNA (h) Lentiviral Particles: sc-40998-V and SOCS-2 shRNA (m) Lentiviral Particles: sc-40999-V.

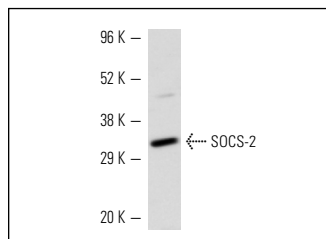
Molecular Weight (predicted) of SOCS-2: 22 kDa.

Molecular Weight (observed) of SOCS-2: 33 kDa.

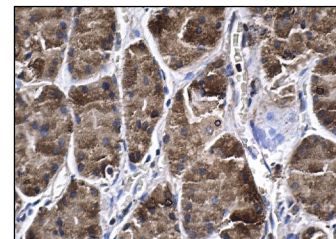
## STORAGE

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

## DATA



SOCS-2 (H-74): sc-9022. Western blot analysis of SOCS-2 expression in mouse heart tissue extract.



SOCS-2 (H-74): sc-9022. Immunoperoxidase staining of formalin fixed, paraffin-embedded human stomach tissue showing cytoplasmic staining of glandular cells.

## SELECT PRODUCT CITATIONS

1. 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.
2. Lejeune, D., et al. 2001. Interleukin-9 induces expression of three cytokine signal inhibitors: cytokine-inducible SH2-containing protein, suppressor of cytokine signalling (SOCS)-2 and SOCS-3, but only SOCS-3 overexpression suppresses interleukin-9 signalling. *Biochem. J.* 353: 109-116.
3. Huang, K.C., et al. 2003. Statins induce suppressor of cytokine signaling-3 in macrophages. *FEBS Lett.* 555: 385-389.
4. Miquet, J.G., et al. 2004. Suppression of growth hormone (GH) Janus tyrosine kinase 2/signal transducer and activator of transcription 5 signalling pathway in transgenic mice overexpressing bovine GH. *Endocrinology* 145: 2824-2832.
5. Miquet, J.G., et al. 2005. Desensitization of the JAK2/Stat5 GH signaling pathway associated with increased CIS protein content in liver of pregnant mice. *Am. J. Physiol. Endocrinol. Metab.* 289: E600-E607.
6. Santangelo, C., et al. 2005. Suppressor of cytokine signaling gene expression in human pancreatic islets: modulation by cytokines. *Eur. J. Endocrinol.* 152: 485-489.
7. Farabegoli, F., et al. 2005. Suppressor of cytokine signalling 2 (SOCS-2) expression in breast carcinoma. *J. Clin. Pathol.* 58: 1046-1050.
8. Ouyang, X., et al. 2006. SOCS-2 interferes with myotube formation and potentiates osteoblast differentiation through upregulation of Jun B in C2C12 cells. *J. Cell. Physiol.* 207: 428-436.

## RESEARCH USE

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