

SOCS-5 (31-L): sc-100858

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.
3. Starr, R., et al. 1997. A family of cytokine-inducible inhibitors of signalling. *Nature* 387: 917-921.

CHROMOSOMAL LOCATION

Genetic locus: SOCS5 (human) mapping to 2p21; Socs5 (mouse) mapping to 17 E4.

SOURCE

SOCS-5 (31-L) is a mouse monoclonal antibody raised against a partial recombinant protein corresponding to the N-terminus of SOCS-5 of human origin.

PRODUCT

Each vial contains 100 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

SOCS-5 (31-L) is recommended for detection of SOCS-5 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).

Suitable for use as control antibody for SOCS-5 siRNA (h): sc-41002, SOCS-5 siRNA (m): sc-41003, SOCS-5 shRNA Plasmid (h): sc-41002-SH, SOCS-5 shRNA Plasmid (m): sc-41003-SH, SOCS-5 shRNA (h) Lentiviral Particles: sc-41002-V and SOCS-5 shRNA (m) Lentiviral Particles: sc-41003-V.

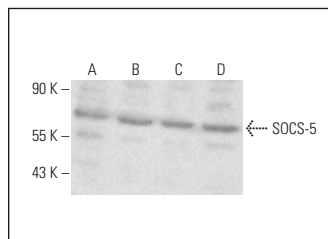
Molecular Weight of SOCS-5: 69 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, C2C12 whole cell lysate: sc-364188 or Jurkat whole cell lysate: sc-2204.

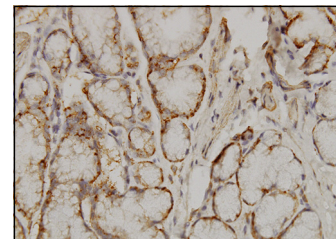
STORAGE

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

DATA



SOCS-5 (31-L): sc-100858. Western blot analysis of SOCS-5 expression in Jurkat (A), NIH/3T3 (B), C2C12 (C) and RPE-J (D) whole cell lysates.



SOCS-5 (31-L): sc-100858. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human smooth muscle tissue showing membrane localization.

SELECT PRODUCT CITATIONS

1. Kim, M.H., et al. 2015. Suppressor of cytokine signaling (SOCS) genes are silenced by DNA hypermethylation and histone deacetylation and regulate response to radiotherapy in cervical cancer cells. *PLoS ONE* 10: e0123133.
2. Feng, Y., et al. 2016. Expression of the SOCS family in human chronic wound tissues: potential implications for SOCS in chronic wound healing. *Int. J. Mol. Med.* 38: 1349-1358.
3. Hu, H., et al. 2020. MicoRNA-301a promotes pancreatic cancer invasion and metastasis through the JAK/STAT3 signaling pathway by targeting SOCS5. *Carcinogenesis* 41: 502-514.
4. Fu, B., et al. 2021. MiR-342 controls *Mycobacterium tuberculosis* susceptibility by modulating inflammation and cell death. *EMBO Rep.* 22: e52252.
5. Luo, D., et al. 2022. SOCS5 knockdown suppresses metastasis of hepatocellular carcinoma by ameliorating HIF-1α-dependent mitochondrial damage. *Cell Death Dis.* 13: 918.
6. Wang, L., et al. 2022. Stellate ganglion block relieves acute lung injury induced by severe acute pancreatitis via the miR-155-5p/SOCS5/JAK2/STAT3 axis. *Eur. J. Med. Res.* 27: 231.
7. Wang, Y., et al. 2024. SOCS5-RBMX stimulates SREBP1-mediated lipogenesis to promote metastasis in steatotic HCC with HBV-related cirrhosis. *NPJ Precis. Oncol.* 8: 58.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.