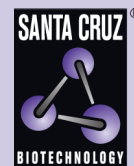


SOCS-3 (SO1): sc-51699



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

CHROMOSOMAL LOCATION

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

SOURCE

SOCS-3 (SO1) is a mouse monoclonal antibody raised against full length SOCS-3 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2b} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

SOCS-3 (SO1) 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), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for SOCS-3 siRNA (h): sc-41000, SOCS-3 siRNA (m): sc-41001, SOCS-3 siRNA (r): sc-270156, SOCS-3 shRNA Plasmid (h): sc-41000-SH, SOCS-3 shRNA Plasmid (m): sc-41001-SH, SOCS-3 shRNA Plasmid (r): sc-270156-SH, SOCS-3 shRNA (h) Lentiviral Particles: sc-41000-V, SOCS-3 shRNA (m) Lentiviral Particles: sc-41001-V and SOCS-3 shRNA (r) Lentiviral Particles: sc-270156-V.

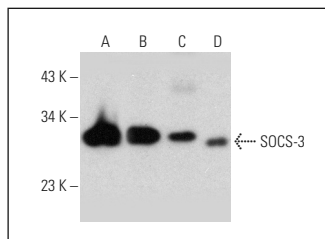
Molecular Weight of SOCS-3: 30 kDa.

Positive Controls: HeLa + IFN-γ cell lysate: sc-2222, HeLa + IL-6 cell lysate: sc-24687 or mouse spleen extract: sc-2391.

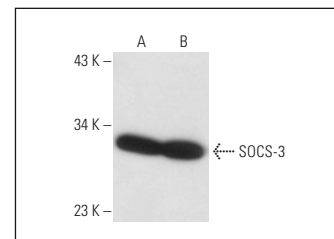
STORAGE

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

DATA



SOCS-3 (SO1): sc-51699. Western blot analysis of SOCS-3 expression in MC3T3-E1 whole cell lysate (A) and mouse spleen (C) and rat PBL (D) tissue extracts.



SOCS-3 (SO1): sc-51699. Western blot analysis of SOCS-3 expression in IFN-γ-treated HeLa (A) and IL-6-treated HeLa (B) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Teofili, L., et al. 2008. Epigenetic alteration of SOCS family members is a possible pathogenetic mechanism in JAK2 wild type myeloproliferative diseases. *Int. J. Cancer* 123: 1586-1592.
2. Gao, Y., et al. 2012. Suppressor of cytokine signaling 3 inhibits breast tumor kinase activation of STAT3. *J. Biol. Chem.* 287: 20904-20912.
3. Huang, N., et al. 2013. The immuno-regulatory impact of orally-administered *Hypericum perforatum* extract on Balb/C mice inoculated with H1N1 influenza A virus. *PLoS ONE* 8: e76491.
4. Mathieu, M.G., et al. 2014. The helicase HAGE prevents interferon-α-induced PML expression in ABCB5+ malignant melanoma-initiating cells by promoting the expression of SOCS1. *Cell Death Dis.* 5: e1061.
5. Masotti, A., et al. 2015. HIV-1 gp120 influences the expression of microRNAs in human monocyte-derived dendritic cells via Stat3 activation. *BMC Genomics* 16: 480.
6. Koskinen-Kolasa, A., et al. 2016. Catabolic and proinflammatory effects of leptin in chondrocytes are regulated by suppressor of cytokine signaling-3. *Arthritis Res. Ther.* 18: 215.
7. Arzt, L., et al. 2017. Signal transducer and activator of transcription 1 (Stat1) knock-down induces apoptosis in malignant pleural mesothelioma. *Pathol. Oncol. Res.* 23: 595-605.
8. Petit, J., et al. 2019. Curcumin induces apoptosis in JAK2-mutated cells by the inhibition of JAK2/Stat and mTORC1 pathways. *J. Cell. Mol. Med.* 23: 4349-4357.
10. Gan, C.J., et al. 2020. EGF receptor inhibitors comprehensively suppress hepatitis B virus by downregulation of STAT3 phosphorylation. *Biochem. Biophys. Rep.* 22: 100763.

RESEARCH USE

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