SANTA CRUZ BIOTECHNOLOGY, INC.

# SOCS-7 (E-8): sc-137241

SANTA CRUZ BIOTECHNOLOGY

*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 SOC-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 (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.
4. Nicholson, S.E. and Hilton, D.J. 1998. The SOCS proteins: a new family of negative regulators of signal transduction. J. Leukoc. Biol. 63: 665-668.
5. Hilton, D.J., et al. 1998. Twenty proteins containing a C-terminal SOCS box form five structural classes. Proc. Natl. Acad. Sci. USA 95: 114-119.


## CHROMOSOMAL LOCATION

Genetic locus: SOCS7 (human) mapping to 17q12; Socs7 (mouse) mapping to 11 D.

## SOURCE

SOCS-7 (E-8) is a mouse monoclonal antibody raised against amino acids 73-184 of SOCS-7 of human origin.

## PRODUCT

Each vial contains 200 µg $IgG_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SOCS-7 (E-8) is available conjugated to agarose (sc-137241 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-137241 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-137241 PE), fluorescein (sc-137241 FITC), Alexa Fluor® 488 (sc-137241 AF488), Alexa Fluor® 546 (sc-137241 AF546), Alexa Fluor® 594 (sc-137241 AF594) or Alexa Fluor® 647 (sc-137241 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-137241 AF680) or Alexa Fluor® 790 (sc-137241 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

## STORAGE

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

## APPLICATIONS

SOCS-7 (E-8) is recommended for detection of SOCS-7 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for SOCS-7 siRNA (h): sc-41004, SOCS-7 siRNA (m): sc-41005, SOCS-7 shRNA Plasmid (h): sc-41004-SH, SOCS-7 shRNA Plasmid (m): sc-41005-SH, SOCS-7 shRNA (h) Lentiviral Particles: sc-41004-V and SOCS-7 shRNA (m) Lentiviral Particles: sc-41005-V.

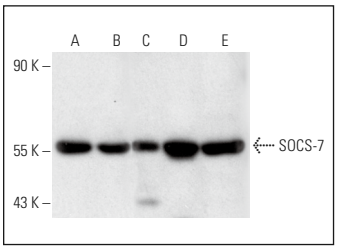
Molecular Weight of SOCS-7: 60 kDa.

Positive Controls: Raji whole cell lysate: sc-364236, MCF7 whole cell lysate: sc-2206 or Jurkat whole cell lysate: sc-2204.

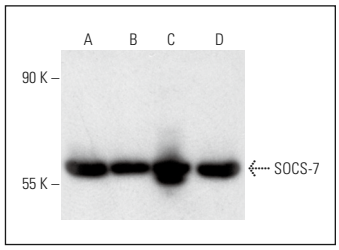
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA




SOCS-7 (E-8): sc-137241. Western blot analysis of SOCS-7 expression in U-87 MG (**A**), HeLa (**B**), IFN-γ treated HL-60 (**C**), IL2 treated Jurkat (**D**) and MDA-MB-231 (**E**) whole cell lysates.




SOCS-7 (E-8): sc-137241. Western blot analysis of SOCS-7 expression in Raji (**A**), MCF7 (**B**), Jurkat (**C**) and HL-60 (**D**) whole cell lysates.

## SELECT PRODUCT CITATIONS


1. 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.
2. Fu, B., et al. 2021. MiR-342 controls *Mycobacterium tuberculosis* susceptibility by modulating inflammation and cell death. EMBO Rep. 22: e52252.


## RESEARCH USE

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