

## SOCS-4 (F-1): sc-518223



The Power to Question

## BACKGROUND

Members of the suppressor of cytokine signaling (SOCS) family of proteins contain C-terminal regions of homology called the SOCS box, which serves to couple SOCS proteins and their binding partners with the Elongin B/C complex. Several other families of proteins also contain SOCS boxes, but differ from the SOCS proteins in the type of domain they contain upstream of the SOCS box. SOCS-4 (suppressor of cytokine signaling 4), also known as SOCS7, is a 440 amino acid protein that contains one SH2 domain and one SOCS box domain, the latter of which mediates interaction with the Elongin B/C complex. Involved in the pathway of protein modification, SOCS-4 exhibits E3 ubiquitin-protein ligase activity and functions to mediate the ubiquitination and subsequent proteasomal degradation of target proteins.

## REFERENCES

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. Zhang, J.G., et al. 1999. The conserved SOCS box motif in suppressors of cytokine signaling binds to elongins B and C and may couple bound proteins to proteasomal degradation. *Proc. Natl. Acad. Sci. USA* 96: 2071-2076.
3. Kile, B.T. and Alexander, W.S. 2001. The suppressors of cytokine signalling (SOCS). *Cell. Mol. Life Sci.* 58: 1627-1635.
4. Larsen, L. and Röpke, C. 2002. Suppressors of cytokine signalling: SOCS. *APMIS* 110: 833-844.
5. Kile, B.T., et al. 2002. The SOCS box: a tale of destruction and degradation. *Trends Biochem. Sci.* 27: 235-241.
6. Kario, E., et al. 2005. Suppressors of cytokine signaling 4 and 5 regulate epidermal growth factor receptor signaling. *J. Biol. Chem.* 280: 7038-7048.

## CHROMOSOMAL LOCATION

Genetic locus: SOCS4 (human) mapping to 14q22.2.

## SOURCE

SOCS-4 (F-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 233-258 of SOCS-4 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SOCS-4 (F-1) is available conjugated to agarose (sc-518223 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-518223 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-518223 PE), fluorescein (sc-518223 FITC), Alexa Fluor® 488 (sc-518223 AF488), Alexa Fluor® 546 (sc-518223 AF546), Alexa Fluor® 594 (sc-518223 AF594) or Alexa Fluor® 647 (sc-518223 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-518223 AF680) or Alexa Fluor® 790 (sc-518223 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

SOCS-4 (F-1) is recommended for detection of SOCS-4 of 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-4 siRNA (h): sc-63050, SOCS-4 shRNA Plasmid (h): sc-63050-SH and SOCS-4 shRNA (h) Lentiviral Particles: sc-63050-V.

Molecular Weight of SOCS-4: 51 kDa.

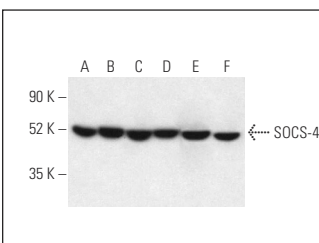
Positive Controls: THP-1 cell lysate: sc-2238, U-937 cell lysate: sc-2239 or Jurkat whole cell lysate: sc-2204.

## RECOMMENDED SUPPORT REAGENTS

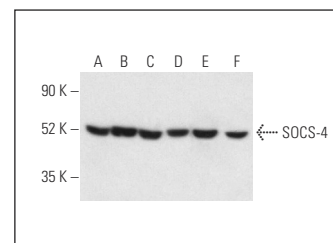
To ensure optimal results, the following support reagents are recommended:

- 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-4 (F-1): sc-518223. Western blot analysis of SOCS-4 expression in THP-1 (A), U-937 (B), Jurkat (C), MCF7 (D), HeLa (E) and U-2 OS (F) whole cell lysates. Detection reagent used: m-IgG<sub>1</sub> BP-HRP: sc-525408.



SOCS-4 (F-1): sc-518223. Western blot analysis of SOCS-4 expression in THP-1 (A), U-937 (B), Jurkat (C), MCF7 (D), HeLa (E) and U-2 OS (F) whole cell lysates. Detection reagent used: m-IgG Fc BP-HRP: sc-525409.

## 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) for detailed protocols and support products.