

## SOCS1 Antibody

*SOCS1 (CT): Suppressor of cytokine signaling 1, JAK-binding protein, JAB*

**CATALOG NO.: 3765**

### BACKGROUND:

The Suppressor of cytokine signaling (SOCS) and cytokine-inducible SH2 proteins are a family of intracellular proteins which regulate the immune cell responses to cytokines (1). SOCS1 acts to suppress dendritic cell (DC) as well as T cell hyperactivation following cytokine signaling by inhibiting JAK tyrosine kinase, a kinase necessary for type I and II cytokine receptors to initiate signaling, by directly binding to the catalytic domain of the kinase (2). SOCS1 also possesses E3 ubiquitin protein ligase activity that results in the polyubiquitination of its target proteins and subsequent degradation by the proteasome (3). It is through this method that SOCS1 negatively regulates signaling by Toll-like receptors TLR2 and TLR4 by mediating the degradation of the TLR signaling adaptor protein TIRAP (4).

### SOURCE:

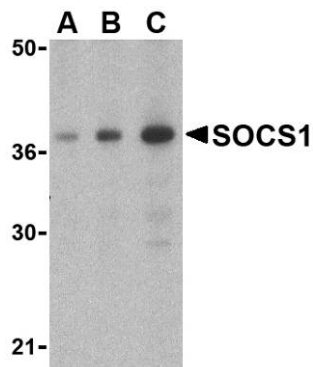
Rabbit polyclonal SOCS1 antibody was raised against an 15 amino acid peptide from near the carboxy terminus of human SOCS1 (Genbank accession No. CAB92528).

### APPLICATION:

SOCS1 antibody can be used for the detection of SOCS1 by Western blot at 1 – 2 µg/ml. (Optimal dilution should be determined by user.) Human spleen cell lysate can be used as positive control. SOCS1 antibody is human, mouse and rat reactive. **This product is for research use only.**

### STORAGE:

SOCS1 antibody is supplied as immunoaffinity purified IgG in PBS containing 0.02% sodium azide. Store at 4°C, stable for one year.



Western blot analysis of SOCS1 in Human spleen cell lysate with SOCS1 antibody at (A) 1, (B) 2 and (C) 4 µg/ml.

### RELATED PRODUCTS:

Blocking Peptide, Catalog No. **3767P**.  
Human Spleen Cell Lysate, Catalog No. **1306**.  
SOCS1 Antibody (NT), Catalog No. **3765**.  
TLR2 Antibody (NT), Catalog No. **3135**.  
TLR4 Antibody (NT), Catalog No. **3141**.  
TIRAP Antibody (CT), Catalog No. **3157**.

### REFERENCES:

1. Rakesh K and Agrawal DK. Controlling cytokine signaling by constitutive inhibitors. *Biochem. Pharm.* 2005; 70:649-57.
2. O'Shea JJ, Gadina M, and Schreiber RD. Cytokine signaling in 2002: new surprises in the Jak/Stat pathway. *Cell* 2002; 109:S121-31.
3. Kile BT, Schulman BA, Alexander WS, et al. The SOCS box: a tale of destruction and degradation. *Trends Biochem. Sci.* 2002; 27:235-41.
4. Mansell A, Smith R, Doyle SL, et al. Suppressor of cytokine signaling 1 negatively mediates Toll-like receptor signaling by mediating Mal degradation. *Nat. Immunol.* 2006; 7:148-55.  
(06-02D)