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SOCS1 Antibody

Catalog # ASC10406

Product Information

Application	WB, E
Primary Accession	O15524
Other Accession	CAB92528, 8217331
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	23551
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	SOCS1 antibody can be used for the detection of SOCS1 by Western blot at 1 - 4 □g/mL.

Additional Information

Gene ID	8651
Other Names	SOCS1 Antibody: JAB, CIS1, SSI1, TIP3, CISH1, SSI-1, SOCS-1, Suppressor of cytokine signaling 1, JAK-binding protein, suppressor of cytokine signaling 1
Target/Specificity	SOCS1;
Reconstitution & Storage	SOCS1 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	SOCS1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SOCS1
Synonyms	SSI1, TIP3 {ECO:0000303|PubMed:9341160}
Function	Essential negative regulator of type I and type II interferon (IFN) signaling, as well as that of other cytokines, including IL2, IL4, IL6 and leukemia inhibitory factor (LIF) (PubMed:32499645, PubMed:33087723). Down-regulates cytokine signaling by inhibiting the JAK/STAT signaling pathway. Acts by binding to JAK proteins and to IFNGR1 and inhibiting their kinase activity. In vitro, suppresses Tec protein-tyrosine activity (PubMed:9341160). Regulates IFN-gamma (IFNG)- mediated sensory neuron survival (By similarity). Probable substrate recognition component of an ECS (Elongin

	BC-CUL2/5-SOCS-box protein) E3 ubiquitin ligase complex which mediates the ubiquitination and subsequent proteasomal degradation of target proteins (PubMed:11278610, PubMed:11313480).
Cellular Location	Nucleus. Cytoplasmic vesicle. Note=Detected in perinuclear cytoplasmic vesicles upon interaction with FGFR3
Tissue Location	Expressed in all tissues with high expression in spleen, small intestine and peripheral blood leukocytes

Background

SOCS1 Antibody: 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. 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. SOCS1 also possesses E3 ubiquitin protein ligase activity that results in the polyubiquitination of its target proteins and subsequent degradation by the proteosome. 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.

References

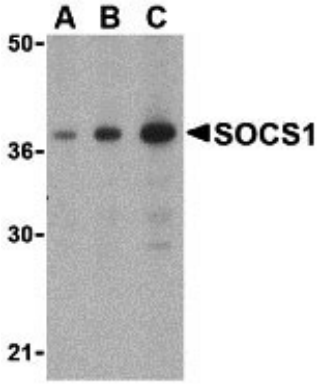
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O'Shea JJ, Gadina M, and Schreiber RD. Cytokine signaling in 2002: new surprises in the Jak/Stat pathway. Cell 2002; 109:S121-31.

Kile BT, Schulman BA, Alexander WS, et al. The SOCS box: a tale of destruction and degradation. Trends Biochem. Sci. 2002; 27:235-41.

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.

Images



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

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.