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Antibodies to Suppressor of Cytokine Signaling 1 (SOCS1)

Suppressor of Cytokine Signaling 1 antibodies. Catalog # SOCS1-101AP, P-SOCS1 and PC-SOCS1.

Accession # 015524 and Alternate Nomenclature: *Suppressor of cytokine signaling 1, JAK-binding protein, STAT-induced STAT inhibitor 1, TIP-3*

Suppressor of cytokine signaling 1 (SOCS1) is a member of the SOCS family of proteins, consisting of eight members (SOCS1 to SOCS7 and CIS) all sharing a central SH2 domain and a c-terminal SOCS box (1). This family is involved in inducible feedback inhibition of janus kinases (JAKs) and signal transducers and activators of transcription (STATs) signaling pathway, which plays multiple roles in cell growth, differentiation, and apoptosis (2). SOCS1 is located on chromosome 16 (3). It plays a key role in the negative regulation of IFN-gamma signaling and in T-cell differentiation. SOCS1 inhibits macrophage differentiation of M1 cells in response to IL-6, protects protein tyrosine phosphatases by thioredoxin upregulation and attenuates JAKs to suppress ROS-mediated apoptosis (2, 4). It translocates into the nucleus due to the presence of a functional nuclear localization signal (NLS). It also regulates IFN-gamma mediated sensory neuronal survival.

SOCS1 is implicated in various cancers and diseases. Mutations of SOCS1 are found in classic Hodgkin lymphoma and primary mediastinal B-cell lymphoma (5). It is induced in response to TNF-alpha or H₂O₂ and by a subset of cytokines including those belonging to interferon, interleukin and colony stimulating factor colonies. It attenuates their signaling by its ability to bind and inhibit all four of the JAKs. It is found to colocalize and biochemically copurify with the microtubule organizing complex (MTOC) and its associated 20S proteasome (6). It is expressed in all tissues with high expression in spleen, small intestine and peripheral blood lymphocytes. It is approximately a 25kDa protein (211 amino acids).

The SOCS1-selective antibodies were generated against purified suppressor of cytokine signaling 1 (SOCS1) protein. SOCS1 -antibodies are affinity purified over immobilized antigen based chromatography, and the purified immunoglobulins are stabilized in antibody stabilization buffer. FabGennix Int. Inc., will also provide limited quantities of antigenic blocking protein for SOCS1 -101AP antibody. Antibodies to SOCS1 (SOCS1 -101AP) will label ~25kDa protein in Western blot positive control samples for SOCS1 and several other tissues. FabGennix Inc. will also conjugate antibodies with secondary enzymes (alk-Pase or HRP) or fluorescent probes upon request at nominal cost.

Catalog #	Host Species	Nature	Cross reactivity	Quantity	Volume
SOCS1-101 AP	Rabbit	Affinity purified SOCS1 antibodies	H, others n.d	100 ug	200ul
FITC- SOCS1	Rabbit	FITC-conjugated SOCS1 antibody	H, others n.d	100ug	200ul
P- SOCS1	n/a	Antigenic blocking peptide for SOCS1 -101AP	n/a	250 ug	100ul
PC- SOCS1	n/a	Western blotting positive control for SOCS1	n/a	For 5 appl	Inquire

R = rat; M = mouse; H = human; C = chicken; monk = monkey ; * not all variants are labeled equally

Immunogen: Synthetic peptides corresponding to unique epitope on SOCS1. The SOCS1 peptide was covalently modified post-synthetically covalently modified to achieve desired antigenicity.

Concentration: SOCS1 -101AP: IgG concentration 0.64-0.72 mg/ml in antibody stabilization buffer.

Applications: Antibody SOCS1 -101AP is ideal for WB and ELISA applications, other applications have not been tested. The species cross reactivity for these antibodies have not been examined fully. The dilutions for this antibody is for reference only, investigators are expected to determine the optimal conditions for specific assay. WB: > 1:500; IMM & i.p pull-down assays: n.d; IHC n.d. ELISA <1:10,000. Application of this antibody in protocols not listed here does not necessarily exclude its use in such procedures.

Reactivity: This antibody detects a single band of approximately 25kDa in PC- SOCS1 samples.

Protocols: Standard protocol for various applications (WB; IMM and IHC) of this antibody is provided with the product specification sheet, however, FabGennix Inc., strongly recommends investigators to optimize conditions for use of this antibody in their laboratories.

Form/Storage: The antiserum is supplied in antibody stabilization buffer. The affinity-purified antibodies are isolated on immobilized antigen-affinity column and supplied as stabilized product. Store at -20°C for long-term storage. FabGennix Inc. does not recommend storage of very dilute antibody solutions unless they are prepared in specially formulated multi use antibody dilution buffer (Cat # DiluOBuffer). Working solutions of antibodies in DiluOBuffer should be filtered through 0.45um filter after every use for long-term storage.

Notes: Briefly centrifuge to collect liquid, heat or boil PC-SOCS1 tube for 1-2 minutes to dissolve any precipitate before use. This product is "ready-to-use" for electrophoresis. After thawing store at room temperature, Repeated freezing and thawing may result in appearance of higher MW immunoreactive bands.

New Reagents: Now you can recycle your western blots (nitrocellulose, supported membranes and PVDF membranes) by using our StripOBuffer (Cat FGI-1989). Each stripping is guaranteed to give better signal (up to 8 stripping). No strong pungent smell of reducing agents or heating required. Block in 5X diluOBuffer and you are ready for blotting with a new antibody

References:

- Larsen L, Ropke C. Suppressors of Cytokine Signaling: SOCS. APMIS. December 2002; 110(12):833-844.
- Oh J, Hur MW, Lee CE. SOCS1 protects protein tyrosine phosphatases by thioredoxin upregulation and attenuates JAK to suppress ROS mediated apoptosis. Oncogene. 3 September 2009; 28(35):3145-3156.
- Yandava CN, Pillari A, Drazen JM. Radiation hybrid and cytogenetic mapping of SOCS1 and SOCS2 to chromosomes 16p13 and 12q, respectively. Genomics. 1 October 1999; 61(1):108-111.
- Starr R, Wilson TA, Viney EM, Murray LJ, Rayner JR, Jenkins BJ, Gonda TJ, Alexander WS, Metcalf D, Nicola NA, Hilton DJ. A family of cytokine-inducible inhibitors of signaling. Nature. 26 June 1997; 6636:917-921.
- Weniger MA, Melzner I, Menz CK, Wegener S, Bucur AJ, Dorsch K, Mattfeldt T, Barth TF, Muller P. Mutations of the tumor suppressor gene SOCS-1 in classical Hodgkin lymphoma are frequent and associated with delayed degradation of JAK2 protein. Oncogene. 2006; 25(18):2679-2684.
- Vuong BQ, Arenzana TL, Showalter BM, Losman J, Chen XP, Mostecky J, Banks AS, Limnander A, Fernandez N, Rothman PB. SOCS-1 localizes to the microtubule organizing complex-associated 20S proteasome. Mol Cell Biol. 2004; 24(20):9092-9101.

* For users who may require large amounts of SOCS1-101AP, please enquire about bulk material discounts.
This Product is for Research Use Only and is NOT intended for use in humans or clinical diagnosis.

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