Immunotag™ SOCS-3 Monoclonal Antibody

Antibody Specification

Catalog No.	ITM1098
Product Description	Immunotag™ SOCS-3 Monoclonal Antibody
Size	50 µg, 100 µg
Conjugation	HRP, Biotin, FITC, Alexa Fluor® 350, Alexa Fluor® 405, Alexa Fluor® 488, Alexa Fluor® 555, Alexa Fluor® 594, Alexa Fluor® 647
IMPORTANT NOTE	This product is custom manufactured with a lead time of 3-4 weeks. Once in production, this item cannot be cancelled from an order and is not eligible for return.
Target Protein	SOCS3
Clonality	Monoclonal
Storage/Stability	-20°C/1 year
Application	WB,IHC-p
Recommended Dilution	Western Blot: 1/1000 - 1/2000. Immunohistochemistry: 1/500 - 1/1000. Not yet tested in other applications.
Concentration	1 mg/ml
Reactive Species	Human
Host Species	Mouse
Immunogen	Purified recombinant human SOCS-3 (N-terminus) protein fragments expressed in E.coli.
Specificity	SOCS-3 Monoclonal Antibody detects endogenous levels of SOCS-3 protein.
Purification	Affinity purification
Form	Purified mouse monoclonal in buffer containing 0.1M Tris-Glycine (pH 7.4, 150 mM NaCl) with 0.2% sodium azide, 50% glycerol.
Gene Name	SOCS3
Accession No.	O14543 O35718
Alternate Names	SOCS3; CIS3; SSI3; Suppressor of cytokine signaling 3; SOCS-3; Cytokine-inducible SH2 protein 3; CIS-3; STAT-induced STAT inhibitor 3; SSI-3

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Description	suppressor of cytokine signaling 3(SOCS3) Homo sapiens This gene encodes a member of the STAT-induced STAT inhibitor (SSI), also known as suppressor of cytokine signaling (SOCS), family. SSI family members are cytokine-inducible negative regulators of cytokine signaling. The expression of this gene is induced by various cytokines, including IL6, IL10, and interferon (IFN)-gamma. The protein encoded by this gene can bind to JAK2 kinase, and inhibit the activity of JAK2 kinase. Studies of the mouse counterpart of this gene suggested the roles of this gene in the negative regulation of fetal liver hematopoiesis, and placental development. [provided by RefSeq, Jul 2008],
Cell Pathway/ Category	Ubiquitin mediated proteolysis,Jak_STAT,Insulin_Receptor,Adipocytokine,Type II diabetes mellitus,
Protein Expression	Placenta,Skeletal muscle,T-cell lymphoma,Thymus,
Subcellular Localization	intracellular,cytoplasm,cytosol,
Protein Function	disease:Genetic variation in the promoter region of SOCS3 may be associated with susceptibility to atopic dermatitis 4 (ATOD4) [MIM:605805]. Atopic dermatitis [MIM:603165], also known as eczema commonly begins in infancy or early childhook and is characterized by ichy and inflamed skin.,domain:The ESS and SH2 domains are required for JAK phosphotyrosine binding. Further interaction with the KIR domain is necessary for signal and kinase inhibition.,domain:The SOCS box domain mediates the interaction with the Elongin BC complex, an adapter module in different E3 ubiquitin ligase complexes.,function:SOCS family proteins form part of a classical negative feedback system that regulates cytokine signal transduction. SOCS3 is involved in negative regulation of cytokines that signal through the JAK/STAT pathway. Inhibits cytokine signal transduction by binding to tyrosine kinase receptors including gp130, LIF, erythropoietin, insulin, IL12, GCSF and leptin receptors. Binding to JAK2 inhibits its kinase activity. Suppresses fetal liver erythropoiesis. Regulates onset and maintenance of allergic responses mediated by T-helper type 2 cells. Regulates IL-6 signaling in vivo (By similarity). Probable substrate recognition component of a SCF-like ECS (Elongin BC-CUL2/5-SOCS-box protein) E3 ubiquitin-protein ligase complex which mediates the ubiquitination and subsequent proteasomal degradation of target proteins. Seems to recognize IL6ST.,pathway:Protein modification; protein ubiquitination.,pharmaceutical:SOCS3 could be used as a possible therapeutic agent for treating rheumatoid arthritis.,PTM:Phosphorylated on tyrosine residues after stimulation by the cytokines, IL-2, EPO or IGF1.,similarity:Contains 1 SH2 domain.,similarity:Contains 1 SOCS box domain.,subunit:Interacts with multiple activated proteins of the tyrosine kinase signaling pathway including IGF1 receptor, insulin receptor and JAK2. Binding to JAK2 is mediated through the KIR and SH2 domains to a phosphorylated tyrosine residue within the JAK2 JH1 domain. Binds specific activated tyrosine residues of the leptin, EPO, IL12, GSCF and gp130 receptors. Interaction with CSNK1E stabilizes SOCS3 protein. Component of the probable ECS(SOCS3) E3 ubiquitin-protein ligase complex which contains CUL5, RNF7/RBX2, Elongin BC complex and SOCS3. Interacts with CUL5, RNF7, TCEB1 and TCEB2. Interacts with CUL2.,tissue specificity:Widely expressed with high expression in heart, placenta, skeletal muscle, peripheral blood leukocytes, fetal and adult lung, and fetal liver and kidney. Lower levels in thymus.,
Usage	For Research Use Only! Not for diagnostic or therapeutic procedures.