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SOCS3 Recombinant Rabbit mAb

Catalog # AP97146

Product Information

Application	WB, IHC-P, IHC-F, IF, E
Primary Accession	O14543
Other Accession	O14543
Reactivity	Rat, Human, Mouse
Host	Rabbit
Clonality	Recombinant
Calculated MW	24770
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Contains 1 SH2 domain. 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.
Post-translational modifications	Phosphorylated on tyrosine residues after stimulation by the cytokines, IL-2, EPO or IGF1.
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.
Background Descriptions	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],

Additional Information

Gene ID	9021
Other Names	ATOD4; CIS3; Cish3; SOCS-3; SSI-3; SSI3; SOCS3_HUMAN; SOCS3; Cytokine-inducible SH2 protein 3 (CIS-3); STAT-induced STAT inhibitor 3 (SSI-3); SOCS3_RAT; Cytokine-inducible SH2 protein 3; suppressor of cytokine

	signaling 3; Suppressor of cytokine signaling 3 (SOCS-3) (Cytokine-inducible SH2 protein 3) (CIS-3) (STAT-induced STAT inhibitor 3) (SSI-3); CIS-3; STAT-induced STAT inhibitor 3
Dilution	IHC-P=1:50-200,IHC-F=1:50-200,WB=1:500-2000,IF=1:50-200,ELISA=1:5000-10000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	SOCS3 (HGNC:19391)
Synonyms	CIS3, SSI3
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 (PubMed:16459330). Inhibits signal transduction by binding to transmembrane signaling receptors including IL6ST/gp130, LIFR, EPOR, INSR, IL12RB2, CSF3R/G-CSF-R and LEPR. Binding to JAK2 inhibits its kinase activity and regulates IL6 signaling. Suppresses fetal liver erythropoiesis. Regulates onset and maintenance of allergic responses mediated by T-helper type 2 cells (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 (PubMed:15601820). Upon OSM stimulation, negatively regulates the JAK-STAT signaling mediated through type II OSM receptor complex by interacting directly with JAK1 (PubMed:16459330).
Tissue Location	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

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