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SOCS2 Rabbit pAb

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Catalog # AP52033

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	O14508
Reactivity	Rat
Predicted	Pig, Dog, Human, Mouse, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	22172
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human Socs2
Epitope Specificity	1-100/198
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	This gene encodes a member of the suppressor of cytokine signaling (SOCS) family. SOCS family members are cytokine-inducible negative regulators of cytokine receptor signaling via the Janus kinase/signal transducer and activation of transcription pathway (the JAK/STAT pathway). SOCS family proteins interact with major molecules of signaling complexes to block further signal transduction, in part, by proteasomal depletion of receptors or signal-transducing proteins via ubiquitination. The expression of this gene can be induced by a subset of cytokines, including erythropoietin, GM-CSF, IL10, interferon (IFN)-gamma and by cytokine receptors such as growth horomone receptor. The protein encoded by this gene interacts with the cytoplasmic domain of insulin-like growth factor-1 receptor (IGF1R) and is thought to be involved in the regulation of IGF1R mediated cell signaling. This gene has pseudogenes on chromosomes 20 and 22. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Jul 2012]

Additional Information

Gene ID	8835
Other Names	Suppressor of cytokine signaling 2, SOCS-2, Cytokine-inducible SH2 protein 2, CIS-2, STAT-induced STAT inhibitor 2, SSI-2, SOCS2 {ECO:0000303|PubMed:10512686, ECO:0000312|HGNC:HGNC:19382}
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
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

SOCS2 {ECO:0000303|PubMed:10512686, ECO:0000312|HGNC:HGNC:19382}

Function

Substrate-recognition component of a cullin-5-RING E3 ubiquitin-protein ligase complex (ECS complex, also named CRL5 complex), which mediates the ubiquitination and subsequent proteasomal degradation of target proteins, such as EPOR and GHR (PubMed:11781573, PubMed:21980433, PubMed:25505247, PubMed:31182716, PubMed:34857742). Specifically recognizes and binds phosphorylated proteins via its SH2 domain, promoting their ubiquitination (PubMed:21980433, PubMed:25505247, PubMed:31182716, PubMed:34857742, PubMed:37816714). The ECS(SOCS2) complex acts as a key regulator of growth hormone receptor (GHR) levels by mediating ubiquitination and degradation of GHR, following GHR phosphorylation by JAK2 (PubMed:21980433, PubMed:25505247, PubMed:34857742). The ECS(SOCS2) also catalyzes ubiquitination and degradation of JAK2-phosphorylated EPOR (PubMed:11781573).

Cellular Location

Cytoplasm.

Tissue Location

High expression in heart, placenta, lung, kidney and prostate. Predominantly expressed in pulmonary epithelia cells, specifically type II pneumocytes.

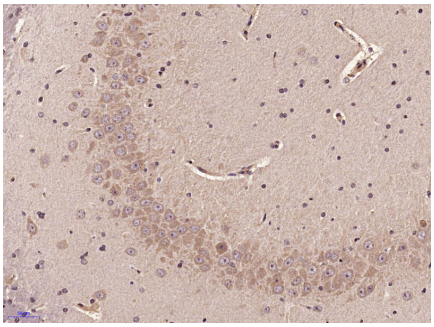
Background

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References

Minamoto S.,et al.Biochem. Biophys. Res. Commun. 237:79-83(1997).
Masuhara M.,et al.Biochem. Biophys. Res. Commun. 239:439-446(1997).
Tu Q.,et al.Submitted (AUG-1997) to the EMBL/GenBank/DDBJ databases.
Dey B.R.,et al.J. Biol. Chem. 273:24095-24101(1998).
Ota T.,et al.Nat. Genet. 36:40-45(2004).

Images



Paraformaldehyde-fixed, paraffin embedded (Rat brain); Antigen retrieval by microwave in sodium citrate buffer (pH6.0) ; Block endogenous peroxidase by 3% hydrogen peroxide for 30 minutes; Blocking buffer (3% BSA) at RT for 30min; Antibody incubation with (SOCS2) Polyclonal Antibody, Unconjugated (AP52033) at 1:400 overnight at 4℃, followed by conjugation to the secondary antibody (labeled with HRP)and DAB staining.

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