BOSTER BIOLOGICAL TECHNOLOGY
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Anti-SOCS3 Antibody Picoband®

Catalog Number: PA1707

About SOCS3

SOCS3 (Suppressor of cytokine signaling 3) is a protein that in humans is encoded by the SOCS3 gene. SOCS3 is transiently expressed by multiple cell lineages within the immune system and functions predominantly as a negative regulator of cytokines that activate the JAK-STAT3 pathway. 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. For signaling of IL-6, Epo, GCSF and Leptin, binding of SOCS3 to the respective cytokine receptor has been found to be crucial for the inhibitory function of SOCS3. 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.

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Overview

Product Name	Anti-SOCS3 Antibody Picoband®
Reactive Species	Human, Mouse
Description	Boster Bio Anti-SOCS3 Antibody catalog # PA1707. Tested in IHC, WB applications. This antibody reacts with Human, Mouse. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains antibody formulated with stabilizing components, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3. *This antibody is supplied in a stabilized formulation. Compatibility with conjugation reactions depends on the chemistry of the conjugation method used. For conjugation methods that are not compatible with the stabilizing components present in this formulation, a carrier-free antibody format is required.
Storage Instructions	Store at -20˚C for one year from date of receipt. After reconstitution, at 4˚C for one month. It can also be aliquotted and stored frozen at -20˚C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	O14543

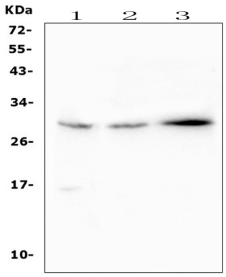
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Technical Details

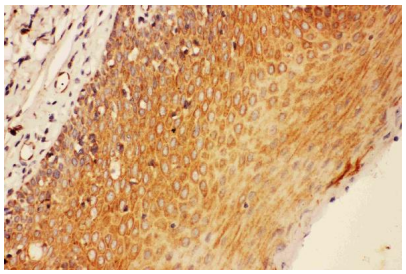
Immunogen	A synthetic peptide corresponding to a sequence in the middle region of human SOCS3, identical to the related mouse sequence, different from the related rat sequence by one amino acid.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P).
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, Mouse Western blot, 0.1-0.5ug/ml, Human, Mouse

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Anti-SOCS3 Antibody Picoband® (PA1707) Images



Western blot analysis of SOCS3 using anti-SOCS3 antibody (PA1707). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: human Hela whole cell lysates, Lane 2: human A549 whole cell lysates, Lane 3: human A431 whole cell lysates. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-SOCS3 antigen affinity purified polyclonal antibody (Catalog # PA1707) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for SOCS3 at approximately 30KD. The expected band size for SOCS3 is at 25KD.



IHC analysis of SOCS3 using anti-SOCS3 antibody (PA1707). SOCS3 was detected in paraffin-embedded section of human tonsil tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-SOCS3 Antibody (PA1707) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

2 Publications Citing This Product

1. PubMed ID: 25695729, Wan J, Che Y, Kang N, Wu W. Mol Med Rep. 2015 Jul;12(1):83-92. Doi: 10.3892/Mmr.2015.3368. Epub 2015 Feb 17. Socs3 Blocks Hif-1?? Expression To Inhibit Proliferation And Angiogenesis Of Human Small Cell Lung Cancer By Downregulating Activation Of ...

2. PubMed ID: 29228585, Yang M, Tian M, Zhang X, Xu J, Yang B, Yu J, Li F, Li Y, Li S, Li X. Oncotarget. 2017 Jun 16;8(57):96958-96969. doi: 10.18632/oncotarget.18555. eCollection 2017 Nov 14. Role of the JAK2/STAT3 signaling pathway in the pathogenesis of type 2 diabete...

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Anti-SOCS3 Antibody

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