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antibody and ELISA experts

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Anti-SP1 Antibody Picoband®

Catalog Number: A00110-1

About SP1

Transcription factor Sp1, also known as specificity protein 1* is a protein that in humans is encoded by the SP1 gene. The protein encoded by this gene is a zinc finger transcription factor that binds to GC-rich motifs of many promoters. The encoded protein is involved in many cellular processes, including cell differentiation, cell growth, apoptosis, immune responses, response to DNA damage, and chromatin remodeling. Post-translational modifications such as phosphorylation, acetylation, glycosylation, and proteolytic processing significantly affect the activity of this protein, which can be an activator or a repressor. Three transcript variants encoding different isoforms have been found for this gene.

Overview

Product Name	Anti-SP1 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-SP1 Antibody Picoband® catalog # A00110-1. Tested in ELISA, Flow Cytometry, IF, IHC, ICC, WB applications. This antibody reacts with Human, Mouse, Rat. 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	ELISA, Flow Cytometry, IF, IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na2HPO4.
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	P08047

Technical Details

Immunogen	E. coli-derived human SP1 recombinant protein (Position: Q384-A603).
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) and ICC.
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.

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Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.1-0.5ug/ml Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml Immunocytochemistry/Immunofluorescence, 5ug/ml Immunofluorescence, 5ug/ml Flow Cytometry(Fixed), 1-3 ug/1x10^6 cells ELISA, 0.1-0.5ug/ml

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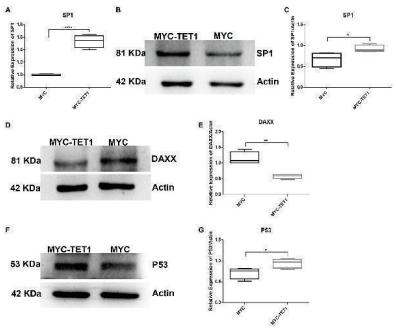
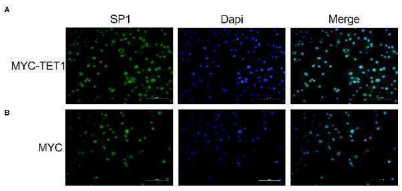
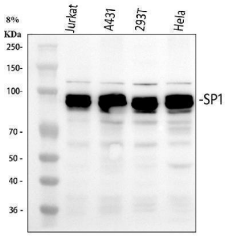
Anti-SP1 Antibody Picoband® (A00110-1) Images



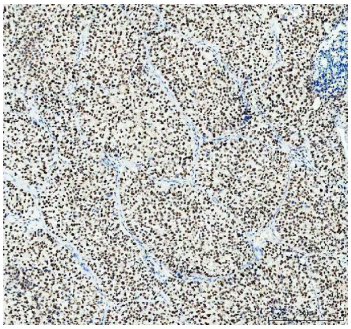
mRNA and protein levels of TET1 and MYC-TET1 cells were detected. (A) The mRNA expression of SP1 in spermatogonial cells was detected by QRT-PCR. (B) The expression of SP1 in TET1 overexpressed cells was detected by Western Blot. (C) Quantification of SP1 protein levels in TET1 overexpressed cells. (D) The expression of DAXX in TET1 overexpressed cells was detected by Western Blot. (E) Quantification of DAXX protein levels in TET1 overexpressed cells. (F) The expression of P53 in TET1 overexpressed cells was detected by Western Blot. (G) Quantification of P53 protein levels in TET1 overexpressed cells. p



Immunofluorescence staining of SP1 in overexpressed and control cells cultured in vitro . (A) Immunofluorescence staining of SP1 in overexpressed cells (MYC-TET1) cultured in vitro . (B) Immunofluorescence staining of SP1 in control cells (MYC) cultured in vitro .Index in PubMed under a CC BY license. PMID: 35222097



Western blot analysis of SP1 using anti-SP1 antibody (A00110-1). 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 30 ug of sample under reducing conditions. Lane 1: human Jurkat whole cell lysates, Lane 2: human A431 whole cell lysates, Lane 3: human 293T whole cell lysates, Lane 4: human Hela whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA 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-SP1 antigen affinity purified polyclonal antibody (Catalog # A00110-1) 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 1:5000 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 SP1 at approximately 90 kDa. The expected band size for SP1 is at 81 kDa.



IHC analysis of SP1 using anti-SP1 antibody (A00110-1). SP1 was detected in a paraffin-embedded section of human non-samll cell lung carcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-SP1 Antibody (A00110-1) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with

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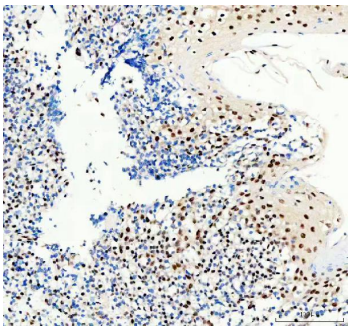
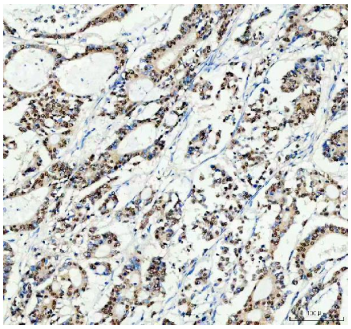
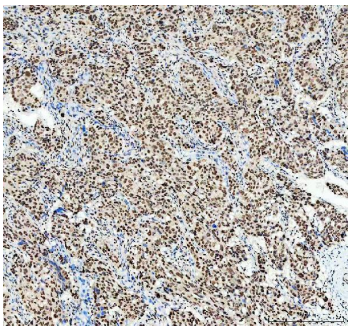
DAB as the chromogen.



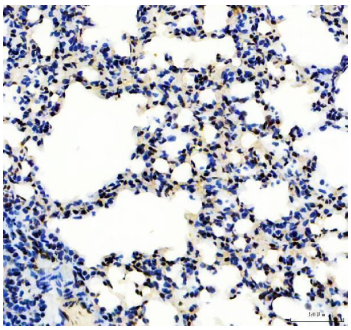
IHC analysis of SP1 using anti-SP1 antibody (A00110-1). SP1 was detected in a paraffin-embedded section of human tonsillitis tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-SP1 Antibody (A00110-1) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



IHC analysis of SP1 using anti-SP1 antibody (A00110-1). SP1 was detected in a paraffin-embedded section of human colorectal adenocarcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-SP1 Antibody (A00110-1) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



IHC analysis of SP1 using anti-SP1 antibody (A00110-1). SP1 was detected in a paraffin-embedded section of human ovarian cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-SP1 Antibody (A00110-1) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



IHC analysis of SP1 using anti-SP1 antibody (A00110-1). SP1 was detected in a paraffin-embedded section of mouse lung tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-SP1 Antibody (A00110-1) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

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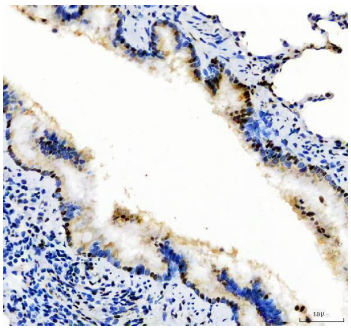
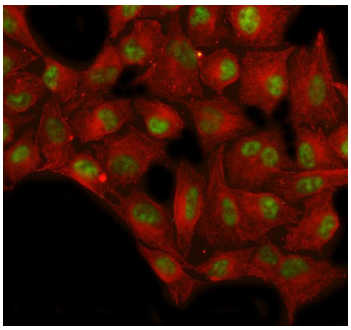
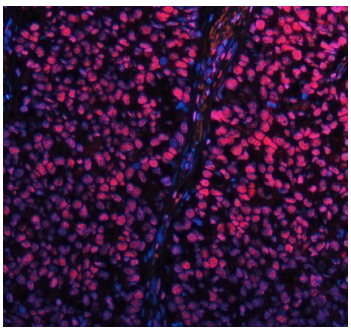


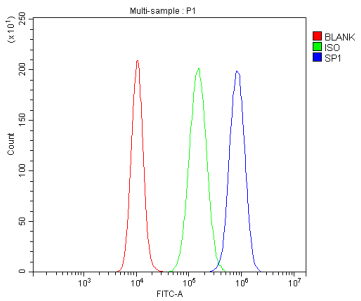
IHC analysis of SP1 using anti-SP1 antibody (A00110-1). SP1 was detected in a paraffin-embedded section of rat lung tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-SP1 Antibody (A00110-1) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



IF analysis of SP1 using anti-SP1 antibody (A00110-1) and anti-Beta Tubulin antibody (M01857-3). SP1 was detected in immunocytochemical section of A549 cell. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/mL rabbit anti-SP1 Antibody (A00110-1) and mouse anti-Beta Tubulin antibody (M01857-3) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) and DyLight®594 Conjugated Goat Anti-Mouse IgG (BA1141) were used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37°C. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



IF analysis of SP1 using anti-SP1 antibody (A00110-1). SP1 was detected in a paraffin-embedded section of human non-samll cell lung carcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 5 ug/mL rabbit anti-SP1 Antibody (A00110-1) overnight at 4°C. Cy3 Conjugated Goat Anti-Rabbit IgG (BA1032) was used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Flow Cytometry analysis of A431 cells using anti-SP1 antibody (A00110-1). Overlay histogram showing A431 cells stained with A00110-1 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-SP1 Antibody (A00110-1, 1 ug/1x106 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10 ug/1x106 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1 ug/1x106) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

2 Publications Citing This Product

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1. PubMed ID: 10.1093/abbs/gmt062, Vascular endothelial growth factor induces multidrug resistance-associated protein 1 overexpression through phosphatidylinositol-3-kinase /protein kinase B signaling pathway and transcription factor specificity protein 1 in BGC823 cell line

2. PubMed ID: 28678802, miR-182 aids in receptive endometrium development in dairy goats by down-regulating PTN expression

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Anti-SP1 Antibody

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