BOSTER BIOLOGICAL TECHNOLOGY
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888-466-3604 | support@bosterbio.com | www.bosterbio.com

Anti-Collagen III/COL3A1 Antibody Picoband®

Catalog Number: A00788-3

About COL3A1

COL3A1, also called EDS4A or Collagen alpha-1 (III), is a protein that in humans is encoded by the COL3A1 gene. It is mapped to 2q32.2. COL3A1 chain is a fibrillar-forming collagen comprising 3 alpha-1 (III) chains and is expressed in early embryos and throughout embryogenesis. In adult, COL3A1 is a major component of the extracellular matrix in a variety of internal organs and skin. COL3A1 is also a fibrous scleroprotein in bone, cartilage, dentin, tendon, bone marrow stroma and other connective tissue. It is involved in regulation of cortical development, and it is the major ligand of GPR56 in the developing brain. COL3A1 binding to GPR56 can inhibit neuronal migration and activate the RhoA pathway by coupling GPR56 to GNA13 and possibly GNA12.

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Overview

Product Name	Anti-Collagen III/COL3A1 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Collagen III/COL3A1 Antibody Picoband® catalog # A00788-3. Tested in ELISA, Flow Cytometry, IHC, 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, IHC, 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	P02461

Technical Details

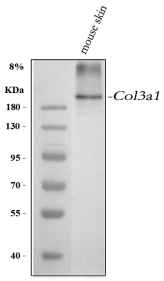
Immunogen	E. coli-derived human Collagen III/COL3A1 recombinant protein (Position: D1222-E1455).

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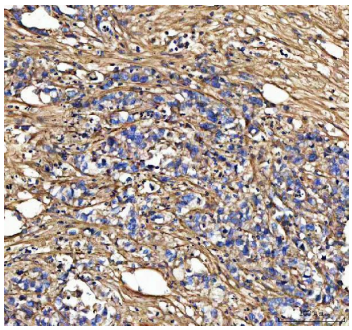
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P).
Cross Reactivity	No cross reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.1-0.5ug/ml Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml Flow Cytometry(Fixed), 1-3 ug/1x10^6 cells ELISA, 0.1-0.5ug/ml Note: For flow cytometry (FCM), suitable for fixed cells only. Not suitable for FACS or surface flow cytometry using live cells.

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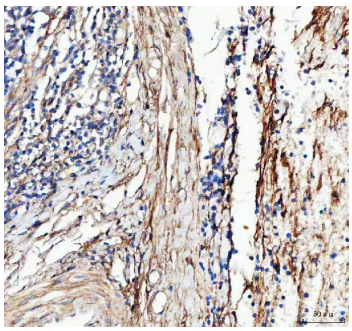
Anti-Collagen III/COL3A1 Antibody Picoband® (A00788-3) Images



Western blot analysis of Collagen III/COL3A1 using anti-Collagen III/COL3A1 antibody (A00788-3). 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: mouse skin tissue 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-Collagen III/COL3A1 antigen affinity purified polyclonal antibody (Catalog # A00788-3) 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 Collagen III/COL3A1 at approximately 200 kDa. The expected band size for Collagen III/COL3A1 is at 139 kDa.



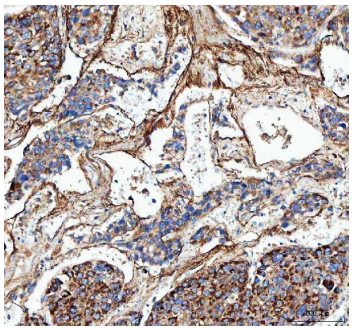
IHC analysis of Collagen III/COL3A1 using anti-Collagen III/COL3A1 antibody (A00788-3). Collagen III/COL3A1 was detected in a paraffin-embedded section of human gastric poorly differentiated adenocarcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-Collagen III/COL3A1 Antibody (A00788-3) 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.



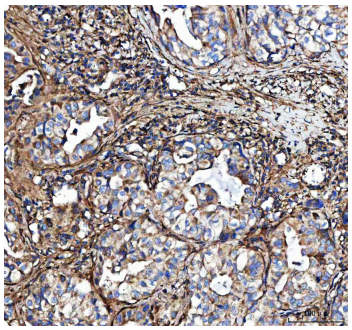
IHC analysis of Collagen III/COL3A1 using anti-Collagen III/COL3A1 antibody (A00788-3). Collagen III/COL3A1 was detected in a paraffin-embedded section of human tonsil tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-Collagen III/COL3A1 Antibody (A00788-3) 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 Collagen III/COL3A1 using anti-Collagen III/COL3A1 antibody (A00788-3). Collagen III/COL3A1 was

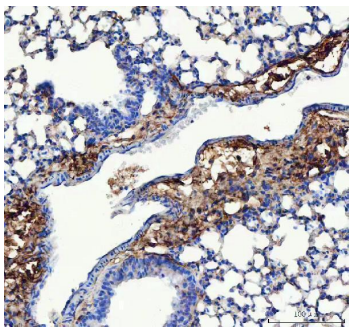
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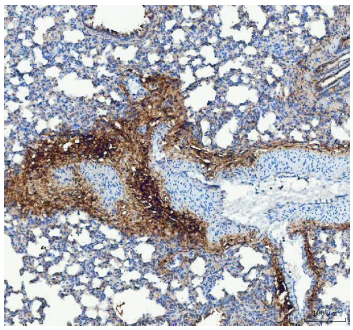
detected in a paraffin-embedded section of human liver cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-Collagen III/COL3A1 Antibody (A00788-3) 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 Collagen III/COL3A1 using anti-Collagen III/COL3A1 antibody (A00788-3). Collagen III/COL3A1 was detected in a paraffin-embedded section of human lung 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 2 ug/ml rabbit anti-Collagen III/COL3A1 Antibody (A00788-3) 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.



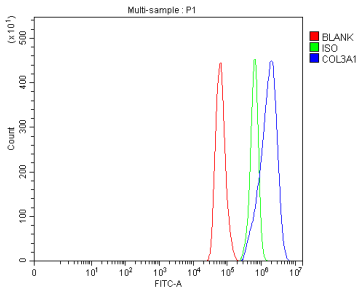
IHC analysis of Collagen III/COL3A1 using anti-Collagen III/COL3A1 antibody (A00788-3). Collagen III/COL3A1 was detected in a paraffin-embedded section of mouse lung tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-Collagen III/COL3A1 Antibody (A00788-3) 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 Collagen III/COL3A1 using anti-Collagen III/COL3A1 antibody (A00788-3). Collagen III/COL3A1 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 2 ug/ml rabbit anti-Collagen III/COL3A1 Antibody (A00788-3) 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.

Flow Cytometry analysis of Hela cells using anti-Collagen

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III/COL3A1 antibody (A00788-3). Overlay histogram showing Hela cells stained with A00788-3 (Blue line). The cells were fixed with 4% paraformaldehyde and blocked with 10% normal goat serum. And then incubated with rabbit anti-Collagen III/COL3A1 Antibody (A00788-3, 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 (Red line) was also used as a control.

41 Publications Citing This Product

1. PubMed ID: 10.1159/000330718, Thrombospondin-1 Short Hairpin RNA Suppresses Tubulointerstitial Fibrosis in the Kidney of Ureteral Obstruction by Ameliorating Peritubular Capillary Injury

2. PubMed ID: 10.1159/000519495, Pirfenidone Attenuates Renal Tubulointerstitial Fibrosis through Inhibiting miR-21

3. PubMed ID: 10.1590/S0100-879X2010007500132, The effect of down-regulation of Smad3 by RNAi on hepatic stellate cells and a carbon tetrachloride-induced rat model of hepatic fibrosis

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