

## Anti-Collagen I/COL1A1 Antibody Picoband™

Catalog Number: PB9939

### About Col1a1

Collagen, type I, alpha 1, also known as COL1A1, is a human gene that encodes the major component of type I collagen, the fibrillar collagen found in most connective tissues, including cartilage. This gene is mapped to 17q21.33. And this gene encodes the [pro-alpha1 chains](#) of type I collagen whose triple helix comprises two alpha1 chains and one alpha2 chain. Type I is a fibril-forming collagen found in most connective tissues and is abundant in bone, cornea, dermis and tendon. Mutations in this gene are associated with osteogenesis imperfecta types I-IV, Ehlers-Danlos syndrome type VIIA, Ehlers-Danlos syndrome Classical type, Caffey Disease and idiopathic osteoporosis.

### Overview

|                      |   |
|----------------------|---|
| Product Name         | Anti-Collagen I/COL1A1 Antibody Picoband™   |
| Reactive Species     | Mouse, Rat  |
| Description          | Boster Bio Anti-Collagen I/COL1A1 Antibody Picoband™ catalog # PB9939. Tested in IHC, WB applications. This antibody reacts with Mouse, Rat.  |
| Application          | IHC, WB   |
| Clonality            | Polyclonal  |
| Formulation          | Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2mg 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           | P11087  |

### Technical Details

|                               |   |
|-------------------------------|---|
| Immunogen                     | A synthetic peptide corresponding to a sequence at the C-terminus of mouse Collagen I, different from the related human sequence by three amino acids, and identical to the related rat sequence. |
| Predicted Reactive Species    | Hamster   |
| 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 | <p>Dilute the sample so that the expected range of concentrations fall within the detection range of this kit.</p> <p>If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples.</p> <p>Some PubMed article(s) citing the expression level of this target are as follows:</p> <p>Boster Bio's internal QC testing used:</p> <p>Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Mouse, Rat, By Heat</p> <p>Western blot, 0.1-0.5ug/ml, Mouse</p> |

## Anti-Collagen I/COL1A1 Antibody Picoband™ (PB9939) Images

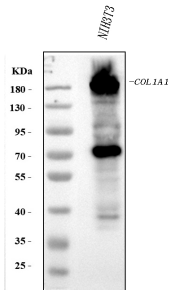


Figure 1. Western blot analysis of COL1A1 using anti-COL1A1 antibody (PB9939).

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 NIH/3T3 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-COL1A1 antigen affinity purified polyclonal antibody (Catalog # PB9939) 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 COL1A1 at approximately 138-180 kDa. The expected band size for COL1A1 is at 138 kDa.

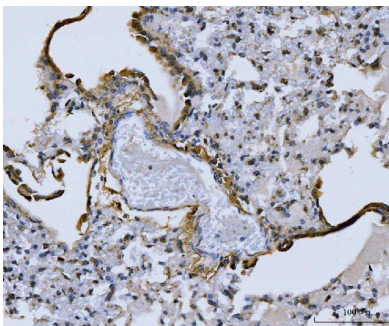


Figure 2. IHC analysis of COL1A1 using anti COL1A1 antibody (PB9939).

COL1A1 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-COL1A1 Antibody (PB9939) 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.

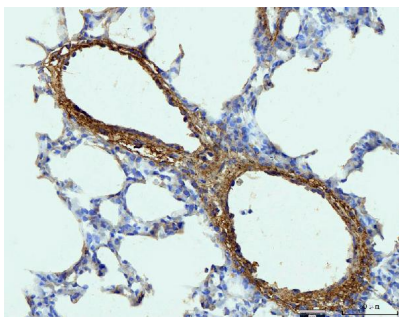


Figure 3. IHC analysis of COL1A1 using anti COL1A1 antibody (PB9939).

COL1A1 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-COL1A1 Antibody (PB9939) 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.

## 59 Publications Citing This Product

1. PubMed ID: 10.1038/s41598-020-67514-4, Investigating the antifibrotic effect of the antiparasitic drug Praziquantel in in vitro and in vivo

preclinical models

2. PubMed ID: 30888602, Wei X, Bao Y, Zhan X, Zhang L, Hao G, Zhou J, Chen Q. MiR-200a ameliorates peritoneal fibrosis and functional deterioration in a rat model of peritoneal dialysis. *Int Urol Nephrol*. 2019 May;51(5):889-896. doi:10.1007/s11255-019-02122-4. Epub 2019 Mar 19. PMID:30888602; PMCID:PMC6499761.

3. PubMed ID: 31169440, Li X, Bu X, Yan F, Wang F, Wei D, Yuan J, Zheng W, Su J, Yuan J. Deletion of discoidin domain receptor 2 attenuates renal interstitial fibrosis in a murine unilateral ureteral obstruction model. *Ren Fail*. 2019 Nov;41(1):481-488. doi:10.1080/0886022X.2019.1621759. PMID:31169440; PMCID:PMC6567249.

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