

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 (1185-1207aa YDFSFLPQPPQEKSQDGGRYRA), 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 μ g/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 Immunohistochemistry (Paraffin-embedded Section), 0.5-1 μg/ml, Mouse, Rat, By Heat</p> <p>Western blot, 0.1-0.5 μg/ml, Mouse</p> <p>For protocols, please visit https://www.bosterbio.com/protocol-and-troubleshooting/</p>

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

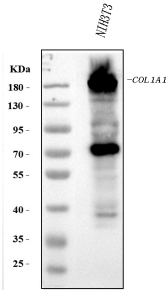


Figure 1. Western blot analysis of COL1A1 using anti-COL1A1 antibody (PB9939).

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.

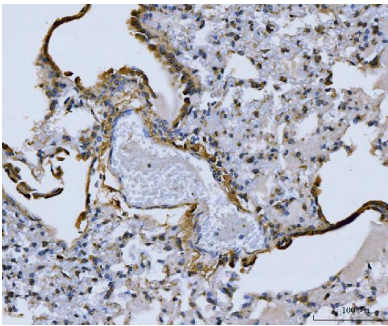


Figure 2. IHC analysis of COL1A1 using anti COL1A1 antibody (PB9939).

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.

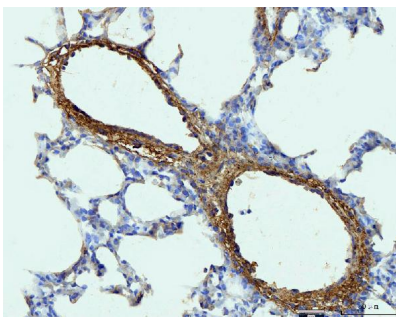


Figure 3. IHC analysis of COL1A1 using anti COL1A1 antibody (PB9939).

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

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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