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antibody and ELISA experts

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Anti-Collagen II/COL2A1 Antibody Picoband™

Catalog Number: A00517-1

About COL2A1

Collagen, type II, alpha 1, also known as COL2A1, is a human gene which is the major collagen synthesized by chondrocvtes. COL2A1 is mapped to 12q13.11. This gene encodes the alpha-1 chain of type II collagen, a fibrillar collagen found in cartilage and the vitreous humor of the eye. Mutations in this gene are associated with achondrogenesis, chondrodysplasia, early onset familial osteoarthritis, SED congenita, Langer-Saldino achondrogenesis, Kniest dysplasia, Stickler syndrome type I, and spondyloepimetaphyseal dysplasia Strudwick type. In addition, defects in processing chondrocalcin, a calcium binding protein that is the C-propeptide of this collagen molecule, are also associated with chondrodysplasia.

Overview

Product Name	Anti-Collagen II/COL2A1 Antibody Picoband™
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Collagen II/COL2A1 Antibody Picoband™ catalog # A00517-1. Tested in WB applications. This antibody reacts with Human, Mouse, Rat.
Application	WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 0.01mg NaN3.
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	P02458

Technical Details

Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human Collagen II, which shares 91.7% and 95.8% amino acid (aa) sequence identity with mouse and rat Collagen II, respectively.
Predicted Reactive Species	Chicken
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized

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Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Dilute the sample so that the expected range of concentrations fall within the detection range of this kit. If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples. Some PubMed article(s) citing the expression level of this target are as follows: Boster Bio's internal QC testing used: Western blot, 0.1-0.5ug/ml

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Anti-Collagen II/COL2A1 Antibody Picoband™ (A00517-1) Images

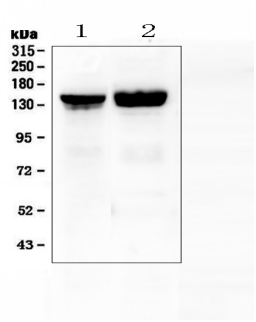


Figure 1. Western blot analysis of Collagen II using anti-Collagen II antibody (A00517-1).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.
Lane 1: rat liver tissue lysates,
Lane 2: mouse liver tissue 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-Collagen II antigen affinity purified polyclonal antibody (Catalog # A00517-1) 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 1:10000 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 Collagen II at approximately 142KD. The expected band size for Collagen II is at 142KD.

24 Publications Citing This Product

1. PubMed ID: 10.1177/0963689721993776, Curcumin Supplementation Enhances Bone Marrow Mesenchymal Stem Cells to Promote the Anabolism of Articular Chondrocytes and Cartilage Repair:

2. PubMed ID: 10.1016/j.cbi.2021.109659, Fluoride regulates chondrocyte proliferation and autophagy via PI3K/AKT/mTOR signaling pathway

3. PubMed ID: 10.1093/abbs/gmw125, GPx1 knockdown suppresses chondrogenic differentiation of ATDC5 cells through induction of reductive stress

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