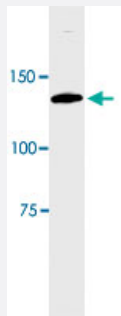


COL1A1 polyclonal antibody

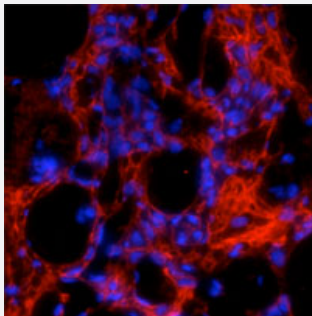
Catalog # PAB17205 Size 100 uL

Applications



Western Blot (Tissue lysate)

Western blot of rat lung lysate showing specific immunolabeling of the ~ 140k COL1A1 protein. Using COL1A1 polyclonal antibody (Cat # PAB17205).



Immunofluorescence

Immunostaining of formaldehyde-fixed fibrotic mouse lung tissue. The antibody recognizes mature COL1A1 (red) that has formed fibrils in the extracellular matrix. Using COL1A1 polyclonal antibody (Cat # PAB17205).

Specification

Product Description	Rabbit polyclonal antibody raised against synthetic peptide of COL1A1.
Immunogen	A synthetic peptide corresponding to amino acids at C-terminus of human COL1A1.
Host	Rabbit
Theoretical MW (kDa)	140
Reactivity	Human, Mouse, Rat

Specificity

This antibody has been directly tested for reactivity in human, mouse, rat and sheep. Based on the homology of the immunogen this antibody is expected to recognize the collagen I 1 polypeptide in all mammals, birds, and amphibians. specific to the ~ 140 KDa telopeptide portion of the collagen I 1 polypeptide. This antibody works well for immunohistochemistry on paraformaldehyde-fixed sections with a simple antigen-retrieval protocol (incubate slides for 20 minutes at 90°C in 10 mM sodium citrate (pH 6.0)/ 0.1% Tween-20). Note that in paraffin sections of formaldehyde-fixed fibrotic mouse lung tissue, This antibody recognizes mature collagen I that has formed fibrils in the extracellular matrix.

Form

Liquid

Purification

Affinity purification

Recommend Usage

Western Blot (1:1000)
Immunohistochemistry (1:100)
The optimal working dilution should be determined by the end user.

Storage Buffer

In 10 mM HEPES, 150 mM NaCl, pH 7.5 (50% glycerol, 0.1 mg/mL BSA)

Storage Instruction

Store at -20°C.
Aliquot to avoid repeated freezing and thawing.

Applications

• Western Blot (Tissue lysate)

Western blot of rat lung lysate showing specific immunolabeling of the ~ 140k COL1A1 protein. Using COL1A1 polyclonal antibody (Cat # PAB17205).

• Immunohistochemistry

• Immunofluorescence

Immunostaining of formaldehyde-fixed fibrotic mouse lung tissue. The antibody recognizes mature COL1A1 (red) that has formed fibrils in the extracellular matrix. Using COL1A1 polyclonal antibody (Cat # PAB17205).

Gene Info — COL1A1

Entrez GeneID

[1277](#)

Protein Accession#

[P02452](#)

Gene Name

COL1A1

Gene Alias

OI4

Gene Description

collagen, type I, alpha 1

Omim ID	114000 120150 130000 130060 166200 166210 166220 166710 259420
Gene Ontology	Hyperlink
Gene Summary	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. Reciprocal translocations between chromosomes 17 and 22, where this gene and the gene for platelet-derived growth factor beta are located, are associated with a particular type of skin tumor called dermatofibrosarcoma protuberans, resulting from unregulated expression of the growth factor. Two transcripts, resulting from the use of alternate polyadenylation signals, have been identified for this gene. [provided by R. Dalgleish]
Other Designations	alpha 1 type I collagen collagen alpha 1 chain type I collagen of skin, tendon and bone, alpha-1 chain pro-alpha-1 collagen type 1 type I collagen alpha 1 chain

Publication Reference

- [Altered collagen I and premature pulmonary embryonic differentiation in patients with OI type II.](#)

S Storoni, L Celli, M Breur, D Micha, S J E Verdonk Ludovic Enkler, Viktoria Szentgyörgyi, Mirjam Pennauer, Cristina Prescianotto-Baschong, Isabelle Riezman, Aneta Wiesyk, Reut Ester Avraham, Martin Spiess, Einat Zalckvar, Roza Kucharczyk, Howard Riezman, Anne Spang, A Maugeri, J G van den Aardweg, M Riminucci, E M W Eekhoff, M Bugiani.
Physiological Reports 2023 Jul; 11(13):e15737.

Application: IHC-P, Human, Human lung

- [Evolution and Discovery of Matrine Derivatives as a New Class of Anti-Hepatic Fibrosis Agents Targeting Ewing Sarcoma Breakpoint Region 1 \(EWSR1\).](#)

Yunyang Bao, Tianyu Niu, Jingyang Zhu, Yuheng Mei, Yulong Shi, Runze Meng, Qionglu Duan, Na Zhang, Tianyun Fan, Yanxiang Wang, Yudong Pang, Yinghong Li, Hongwei He, Danqing Song.
Journal of Medicinal Chemistry 2023 Jun; 66(12):7969.

Application: WB-Ce, Human, LX-2 cell

- [Structure Optimization of 12β- O-γ-Glutamyl Oleanolic Acid Derivatives Resulting in Potent FXR Antagonist/Modulator for NASH Therapy.](#)

Hao Ma, Yunyang Bao, Shuaishuai Niu, Shaorong Wang, Yiming Li, Hongwei He, Na Zhang, Weishuo Fang.
Pharmaceuticals 2023 May; 16(5):758.

Application: WB, Human, Rat, HSC-T6, LX-2 cells

- [Pantoprazole ameliorates liver fibrosis and suppresses hepatic stellate cell activation in bile duct ligation rats by promoting YAP degradation.](#)

Zhen-Ning Lu, Wei-Xiao Niu, Na Zhang, Mao-Xu Ge, Yun-Yang Bao, Yu Ren, Xiu-Li Guo and Hong-Wei He.

Acta Pharmacologica Sinica 2021 Nov; 42(11):1808.

Application: WB-Ce, WB-Ti, Human, Mouse, Rat, mHSC cells, LX-2 cells, Rat liver

- [Costunolide represses hepatic fibrosis through WW domain-containing protein 2-mediated Notch3 degradation.](#)

Ge MX, Liu HT, Zhang N, Niu WX, Lu ZN, Bao YY, Huang R, Yu DK, Shao RG, He HW.

British Journal of Pharmacology 2020 Jan; 177(2):372.

Application: WB-Ti, Rat, Rat livers

- [Oxidants produced by Methylglyoxal-modified Collagen Trigger ER Stress and Apoptosis in Skin Fibroblasts.](#)

Nowotny K, Castro JP, Hugo M, Braune S, Weber D, Pignitter M, Somoza V, Bornhorst J, Schwerdtle T, Grune T.

Free Radical Biology & Medicine 2018 May; 120:102.

Application: WB, Human, Skin fibroblasts foreskin tissue

- [Cobalt chloride induces RhoA/ROCK activation and remodeling effect in H9c2 cardiomyoblasts: Involvement of PI3K/Akt and MAPK pathways.](#)

Cheng CI, Lee YH, Chen PH, Lin YC, Chou MH, Kao YH.

Cellular Signalling 2017 Aug; 36:25.

Application: WB, Rat, H9c2 cardiomyoblast cells

- [Mutations near amino end of alpha1\(I\) collagen cause combined osteogenesis imperfecta/Ehlers-Danlos syndrome by interference with N-propeptide processing.](#)

Cabral WA, Makareeva E, Colige A, Letocha AD, Ty JM, Yeowell HN, Pals G, Leikin S, Marini JC.

The Journal of Biological Chemistry 2005 May; 280(19):19259.

- [Inherited disorders of collagen gene structure and expression.](#)

Byers PH.

American Journal of Medical Genetics 1989 Sep; 34(1):72.

Pathway

- [ECM-receptor interaction](#)
- [Focal adhesion](#)

Disease

- [Alzheimer disease](#)
- [Aortic Aneurysm](#)
- [beta-Thalassemia](#)
- [Body Weight](#)
- [Bone Diseases](#)
- [Bone Neoplasms](#)
- [Cardiovascular Diseases](#)
- [Chorioamnionitis](#)
- [Chronic Disease](#)
- [Clubfoot](#)
- [Connective Tissue Diseases](#)
- [Coronary Artery Disease](#)
- [Crohn Disease](#)
- [Cystic fibrosis](#)
- [Diabetes Complications](#)
- [Diabetes Mellitus](#)
- [Disease Susceptibility](#)
- [Diseases in Twins](#)
- [Dwarfism](#)
- [Edema](#)
- [Femoral Neck Fractures](#)
- [Fetal Diseases](#)
- [Fetal Membranes](#)
- [Fractures](#)

- [Genetic Predisposition to Disease](#)
- [Glaucoma](#)
- [Hearing Loss](#)
- [Hepatitis B](#)
- [Hip Dislocation](#)
- [Hip Fractures](#)
- [Infection](#)
- [Inflammation](#)
- [Insulin Resistance](#)
- [Intervertebral Disk Displacement](#)
- [Liver Cirrhosis](#)
- [Low Back Pain](#)
- [Metabolic Syndrome X](#)
- [Mouth Neoplasms](#)
- [Musculoskeletal Diseases](#)
- [Myocardial Infarction](#)
- [Myopia](#)
- [Neoplasms](#)
- [Obstetric Labor](#)
- [Oral Submucous Fibrosis](#)
- [Osteoarthritis](#)
- [Osteogenesis Imperfecta](#)
- [Osteoporosis](#)
- [Otosclerosis](#)
- [Periodontitis](#)

- [Precancerous Conditions](#)
- [Pre-Eclampsia](#)
- [Pregnancy Complications](#)
- [Premature Birth](#)
- [Puberty](#)
- [Pulmonary Disease](#)
- [Rupture](#)
- [Shoulder Dislocation](#)
- [Skin Diseases](#)
- [Soft Tissue Injuries](#)
- [Spinal Diseases](#)
- [Spinal Fractures](#)
- [Spinal Injuries](#)
- [Tendinopathy](#)
- [Thalassemia](#)
- [Tobacco Use Disorder](#)
- [Urinary Incontinence](#)
- [Uterine Cervical Incompetence](#)
- [Wrist Injuries](#)