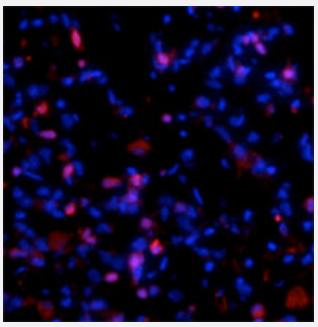
# COL1A1 polyclonal antibody

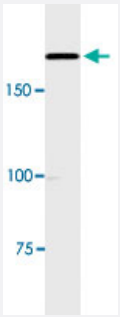
Catalog # PAB17204 Size 100 uL

## Applications



### Immunofluorescence

Immunofluorescence staining of fibrotic mouse lung tissue showing specific staining of COL1A1 molecules (red) that are still associated with the cells in which they were synthesized. Using COL1A1 polyclonal antibody (Cat # PAB17204).




### Western Blot (Tissue lysate)

Western blot of rat lung lysate showing specific immunolabeling of the ~180 k COL1A1 protein. Using COL1A1 polyclonal antibody (Cat # PAB17204).

## Specification

| | |
|---|---|
| **Product Description** | Rabbit polyclonal antibody raised against synthetic peptide of COL1A1. |
| **Immunogen** | A synthetic peptide corresponding to human COL1A1. |
| **Host** | Rabbit |
| **Theoretical MW (kDa)** | 180 |
| **Reactivity** | Birds, Fish, Human, Mammals, Mouse, Rat |

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| | |
|---|---|
| **Specificity** | This antibody has been directly tested for reactivity in human, mouse and rat. Based on the homology of the antigen this antibody is expected to recognize the collagen I 1 polypeptide in most, if not all, sp ecies of mammals, birds, amphibians, and fishes. specific to the propeptide portion of the ~180 KDa collagen I alpha1 polypeptide in human lung fibroblast extract. This antibody also works well for immu nohistochemistry on paraformaldehyde-fixed sections with a simple antigen-retrieval protocol (incuba te slides for 20 minutes at 90°C in 10 mM sodium citrate (pH 6.0)/ 0.1% Tween-20). Note that in para ffin sections of formaldehyde-fixed fibrotic mouse lung tissue, This antibody recognizes collagen I mol ecules that are still associated with the cells in which they were synthesized. |
| **Form** | Liquid |
| **Purification** | Affinity purification |
| **Recommend Usage** | Western Blot (1:1000)<br>Immunohistochemistry (1:100)<br>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.<br>Aliquot to avoid repeated freezing and thawing. |

## Applications

- Immunohistochemistry
- Immunofluorescence

  Immunofluorescence staining of fibrotic mouse lung tissue showing specific staining of COL1A1 molecules (red) that are still associated with the cells in which they were synthesized. Using COL1A1 polyclonal antibody (Cat # PAB17204).

- Western Blot (Tissue lysate)

  Western blot of rat lung lysate showing specific immunolabeling of the ~180 k COL1A1 protein. Using COL1A1 polyclonal antibody (Cat # PAB17204).

## Gene Info — COL1A1

| | |
|---|---|
| **Entrez GeneID** | 1277 |
| **Protein Accession#** | P02452 |
| **Gene Name** | COL1A1 |
| **Gene Alias** | OI4 |
| **Gene Description** | collagen, type I, alpha 1 |

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| | |
|---|---|
| **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

- 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

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- 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

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- 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

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- 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

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