



AB-82138 Anti-Collagen I Antibody

Size: 100 ug
Concentration: 1mg/ml
Source: Rabbit
Isotype: IgG
Purification method: Affinity purification
Cross-reactivity: Human, Mouse, Rat

Background: 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.

Immunogen: A synthetic peptide corresponding to a sequence within amino acids 1100-1200 of human Collagen I/COL1A1.

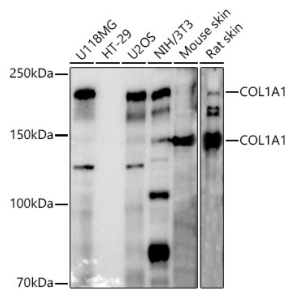
Synonyms: COL1A1;EDSC;OI1;OI2;OI3;OI4

Observed MW: 140KDa/220KDa

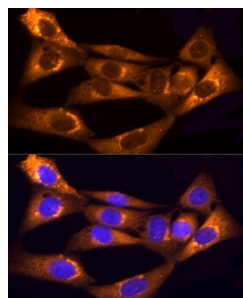
Applications:
Western Blot: 1:500 - 1:2000
Immunohistochemistry: 1:50 - 1:200
Immunofluorescence: 1:50 - 1:200

Buffer: PBS containing 50% glycerol, preserved with proclin300 or sodium azide, pH 7.3

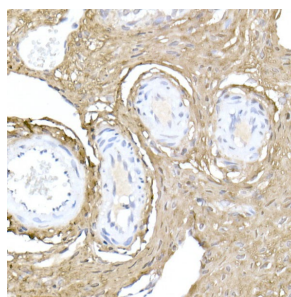
Storage: Store at -20°C. Avoid freeze / thaw cycles.



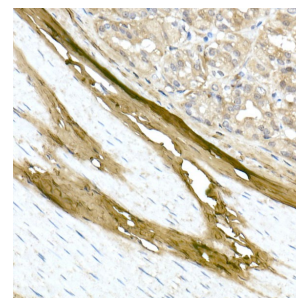
Western blot analysis of extracts of various cell lines, using Collagen I/COL1A1 antibody at 1:1000 dilution. Secondary antibody: HRP Goat Anti-Rabbit IgG (H+L) at 1:10000 dilution. Lysates/proteins: 25ug per lane. Blocking buffer: 3% nonfat dry milk in TBST. Detection: ECL West Pico Plus. Exposure time: 60s.



Immunofluorescence analysis of NIH/3T3 cells using Collagen I/COL1A1 Rabbit pAb at dilution of 1:150 (40x lens). Blue: DAPI for nuclear staining.



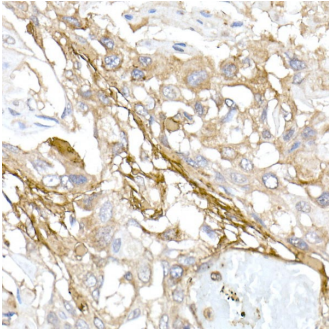
Immunohistochemistry of paraffin embedded rat ovary using Collagen I/COL1A1 Rabbit pAb at dilution of 1:150 (40x lens). Perform microwave antigen retrieval with 10 mM PBS buffer pH 7.2 before commencing with IHC staining protocol.



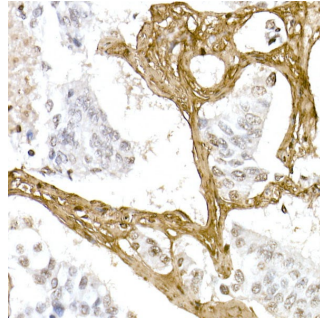
Immunohistochemistry of paraffin embedded rat stomach using Collagen I/COL1A1 Rabbit pAb at dilution of 1:150 (40x lens). Perform microwave antigen retrieval with 10 mM PBS buffer Ph 7.2 before commencing with IHC staining protocol.

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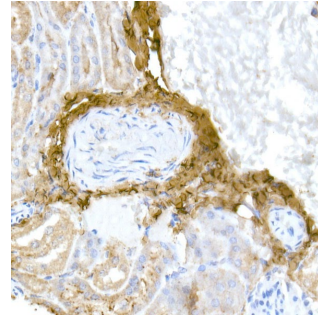
Web-site: www.immunologicalsciences.com - E-Mail: info@immunologicalsciences.com



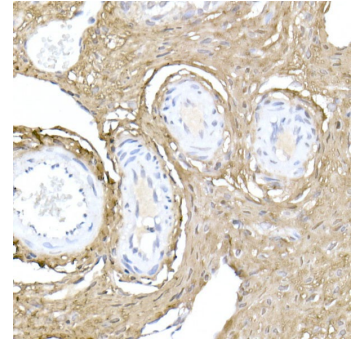
Immunohistochemistry of Paraffin embedded human esophageal cancer using Collagen I/COL1A1 Rabbit pAb at dilution of 1:150 (40x lens). Perform microwave antigen retrieval with 10 mM PBS buffer pH 7.2 before commencing with IHC staining protocol.



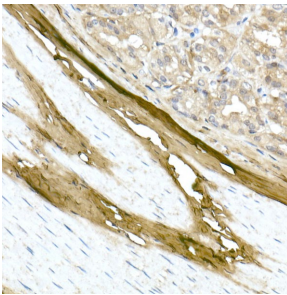
Immunohistochemistry of paraffin embedded human lung cancer using Collagen I/COL1A1 Rabbit pAb at dilution of 1:150 (40x lens). Perform microwave antigen retrieval with 10 mM PBS buffer pH 7.2 before commencing with IHC staining protocol.



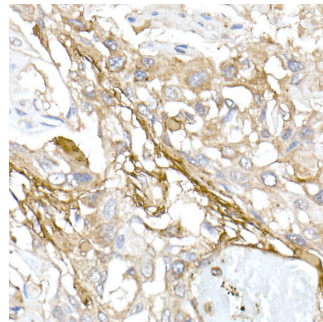
Immunohistochemistry of paraffin embedded mouse kidney using Collagen I/COL1A1 Rabbit pAb at dilution of 1:150 (40x lens). Perform microwave antigen retrieval with 10 mM PBS buffer pH 7.2 before commencing with IHC staining protocol.



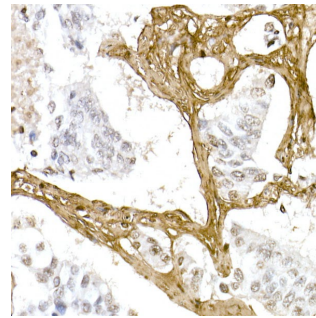
Immunohistochemistry of paraffin embedded rat ovary using Collagen I/COL1A1 Rabbit pAb at dilution of 1:150 (40x lens). Perform microwave antigen retrieval with 10 mM PBS buffer pH 7.2 before commencing with IHC staining protocol.



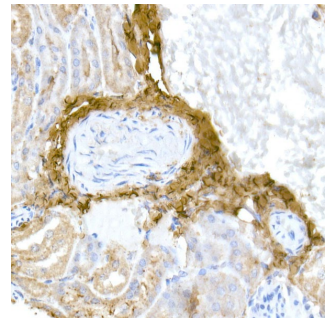
Immunohistochemistry of paraffin embedded rat stomach using Collagen I/COL1A1 Rabbit pAb at dilution of 1:150 (40x lens). Perform microwave antigen retrieval with 10 mM PBS buffer pH 7.2 before commencing with IHC staining protocol.



Immunohistochemistry of paraffin embedded human esophageal cancer using Collagen I/COL1A1 Rabbit pAb at dilution of 1:150 (40x lens). Perform microwave antigen retrieval with 10 mM PBS buffer pH 7.2 before commencing with IHC staining protocol.



Immunohistochemistry of paraffin embedded human lung cancer using Collagen I/COL1A1 Rabbit pAb at dilution of 1:150 (40x lens). Perform microwave antigen retrieval with 10 mM PBS buffer pH 7.2 before commencing with IHC staining protocol.



Immunohistochemistry of paraffin embedded mouse kidney using Collagen I/COL1A1 Rabbit pAb at dilution of 1:150 (40x lens). Perform microwave antigen retrieval with 10 mM PBS buffer pH 7.2 before commencing with IHC staining protocol.



Immunohistochemistry Protocol (Paraffin embedded tissues)

Cat.n. AB-82138 Anti-Collagen I Antibody

1. Deparaffinize twice, 10 minutes each time.
2. Rehydrate.
3. Retrieve the antigen and then cool naturally.
4. Incubate slides with 3% H₂O₂ solution (100 µl) for 15 minutes to quench endogenous peroxidase activity. Rinse slides with PBS for 3 times, 5 minutes each time.
5. Draw 2 lines beside the tissue section to keep the liquid from flowing away.
6. Block the sections with corresponding serum or BSA.
7. Incubate sections with primary antibody overnight at 4°C. Then rinse slides with PBS for 3 times, 5 minutes each time.
8. Apply peroxidase-labeled secondary antibody and incubate for 30 minutes. Rinse slides with PBS.
9. DAB plus chromogen
10. Hematoxylin or DAPI for nuclei staining.
11. Dehydration and mounting. Dehydrate sections with graded ethanol, 75 % (1 minute), 85 % (1 minute), 90 % (1 minute), 100 % (1 minute), 100 % (1 minute). Immerse slides in xylene for 5 minutes. Repeat once.
12. Signal Detection. Mount and cover the section for detection.



References for Collagen I/COL1A1 Rabbit pAb
Product:Collagen I/COL1A1 Rabbit pAb
Journal:Biochemical and biophysical research communications
Application:WB
IF:3.575
Species:Mus musculus
PMID:[30797555](#)
Title:Alogliptin alleviates liver fibrosis via suppression of activated hepatic stellate cell.
References for Collagen I/COL1A1 Rabbit pAb

Product:Collagen I/COL1A1 Rabbit pAb
Journal:Biochemical Pharmacology
Application:WB, IF
IF:5.858
Species:Rattus norvegicus
PMID:[32194056](#)
Title:Dexamethasone causes calcium deposition and degeneration in human anterior cruciate ligament cells through endoplasmic reticulum stress

References for Collagen I/COL1A1 Rabbit pAb
Product:Collagen I/COL1A1 Rabbit pAb
Journal:Frontiers in Pharmacology
Application:IHC
IF:5.81
Species:Mus musculus
PMID:[32296329](#)
Title:Calcipotriol Inhibits NLRP3 Signal Through YAP1 Activation to Alleviate Cholestatic Liver Injury and Fibrosis

References for Collagen I/COL1A1 Rabbit pAb
Product:Collagen I/COL1A1 Rabbit pAb
Journal:Frontiers in Pharmacology
Application:WB
IF:5.81
Species:Mus musculus
PMID:[32296329](#)
Title:Calcipotriol Inhibits NLRP3 Signal Through YAP1 Activation to Alleviate Cholestatic Liver Injury and Fibrosis

References for Collagen I/COL1A1 Rabbit pAb
Product:Collagen I/COL1A1 Rabbit pAb
Journal:Journal of Tissue Engineering and Regenerative Medicine,
Application:IHC
IF:3.963
Species:Homo sapiens,Bovine
PMID:[32012486](#)
Title:Genipin-crosslinked decellularized annulus fibrosus hydrogels induces tissue-specific differentiation of bone mesenchymal stem cells and intervertebral disc regeneration

References for Collagen I/COL1A1 Rabbit pAb
Product:Collagen I/COL1A1 Rabbit pAb
Journal:Annals of Translational Medicine
Application:IHC
IF:3.932
Species:Homo sapiens,Mus musculus
PMID:[32355763](#)
Title:Downregulation of ubiquitin-specific protease 2 possesses prognostic and diagnostic value and promotes the clear cell renal cell carcinoma progression

References for Collagen I/COL1A1 Rabbit pAb
Product:Collagen I/COL1A1 Rabbit pAb
Journal:Nature Communications
Application:IF
IF:14.919
Species:Homo sapiens,Mus musculus
PMID:[32385263](#)
Title:A RUNX2 stabilization pathway mediates physiologic and pathologic bone formation

References for Collagen I/COL1A1 Rabbit pAb
Product:Collagen I/COL1A1 Rabbit pAb
Journal:Biochem Biophys Res Commun
Application:WB
IF:3.575
Species:Mus musculus
PMID:[32505342](#)
Title:NLRC5 deficiency ameliorates cardiac fibrosis in diabetic cardiomyopathy by regulating EndMT through Smad2/3 signaling pathway

References for Collagen I/COL1A1 Rabbit pAb
Product:Collagen I/COL1A1 Rabbit pAb
Journal:Cell Prolif
Application:WB
IF:6.831
Species:Rattus norvegicus
PMID:[33543561](#)
Title:Biological testing of chitosan-collagen-based porous scaffolds loaded with PLGA/Triamcinolone microspheres for ameliorating endoscopic dissection-related stenosis in oesophagus

References for Collagen I/COL1A1 Rabbit pAb
Product:Collagen I/COL1A1 Rabbit pAb
Journal:Mater Sci Eng C Mater Biol Appl

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Web-site: www.immunologicalsciences.com - E-Mail: info@immunologicalsciences.com



Application:IF

IF:7.32

Species:Homo sapiens

PMID:[34579879](#)

Title:Construction of tissue-engineered skin with rete ridges using co-network hydrogels of gelatin methacrylated and poly(ethylene glycol) diacrylate

References for Collagen I/COL1A1 Rabbit pAb

Product:Collagen I/COL1A1 Rabbit pAb

Journal:Int J Mol Med

Application:WB

IF:4.1

Species:Rattus norvegicus

PMID:[33982787](#)

Title:Myocardin-related transcription factor A nuclear translocation contributes to mechanical overload-induced nucleus pulposus fibrosis in rats with intervertebral disc degeneration

References for Collagen I/COL1A1 Rabbit pAb

Product:Collagen I/COL1A1 Rabbit pAb

Journal:Phytomedicine

Application:WB

IF:5.34

Species:Mus musculus

PMID:[34126414](#)

Title:Schisantherin A ameliorates liver fibrosis through TGF- β 1-mediated activation of TAK1/MAPK and NF- κ B pathways in vitro and in vivo

References for Collagen I/COL1A1 Rabbit pAb

Product:Collagen I/COL1A1 Rabbit pAb

Journal:Int J Biol Sci

Application:WB

IF:6.58

Species:Homo sapiens

PMID:[34803485](#)

Title:KMT5A Downregulation Participated In High Glucose-mediated EndMT Via Upregulation of ENO1 Expression in Diabetic Nephropathy

References for Collagen I/COL1A1 Rabbit pAb

Product:Collagen I/COL1A1 Rabbit pAb

Journal:Eur J Pharmacol

Application:WB

IF:4.432

Species:Mus musculus

PMID:[34480883](#)

Title:Nootkatone confers antifibrotic effect by regulating the TGF- β /Smad signaling pathway in mouse model of unilateral ureteral obstruction

References for Collagen I/COL1A1 Rabbit pAb

Product:Collagen I/COL1A1 Rabbit pAb

Journal:Cardiovasc Toxicol

Application:WB

IF:3.231

Species:Mus musculus

PMID:[34519946](#)

Title:HIV Tat Protein Induces Myocardial Fibrosis Through TGF- β 1-CTGF Signaling Cascade: A Potential Mechanism of HIV Infection-Related Cardiac Manifestations

References for Collagen I/COL1A1 Rabbit pAb

Product:Collagen I/COL1A1 Rabbit pAb

Journal:Acta Biochim Biophys Sin (Shanghai)

Application:WB

IF:3.848

Species:Homo sapiens

PMID:[34519779](#)

Title:Betulinic acid promotes the osteogenic differentiation of human periodontal ligament stem cells by upregulating EGR1

References for Collagen I/COL1A1 Rabbit pAb

Product:Collagen I/COL1A1 Rabbit pAb

Journal:Life Sci

Application:WB

IF:5.037

Species:Rattus norvegicus

PMID:[34801516](#)

Title:Aloin alleviates pathological cardiac hypertrophy via modulation of the oxidative and fibrotic response

References for Collagen I/COL1A1 Rabbit pAb

Product:Collagen I/COL1A1 Rabbit pAb

Journal:Advanced Healthcare Materials

Application:WB

IF:9.933

Species:Mus musculus

PMID:[31583846](#)

Title:Dual Function of Magnesium in Bone Biomineralization

References for Collagen I/COL1A1 Rabbit pAb

Product:Collagen I/COL1A1 Rabbit pAb

Journal:Cells

Application:WB

IF:6.6

Species:Homo sapiens

PMID:[34831433](#)

Title:Deleterious Role of Th9 Cells in Pulmonary Fibrosis

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Web-site: www.immunologicalsciences.com - E-Mail: info@immunologicalsciences.com



References for Collagen I/COL1A1 Rabbit pAb

Product:Collagen I/COL1A1 Rabbit pAb

Journal:Journal of molecular and cellular cardiology

Application:WB

IF:5

Species:Rattus norvegicus

PMID:[31958465](#)

Title:MFGE8 attenuates Ang-II-induced atrial fibrosis and vulnerability to atrial fibrillation through inhibition of TGF- β 1/Smad2/3 pathway

References for product:Collagen I/COL1A1 Rabbit pAb

Journal:Advanced healthcare materials

Application:IHC

IF:9.93

Species:Homo sapiens

PMID:[33694330](#)

Title:Biomimetic Silk Fibroin Hydrogels Strengthened by Silica Nanoparticles Distributed Nanofibers Facilitate Bone Repair

References for Collagen I/COL1A1 Rabbit pAb

Product:Collagen I/COL1A1 Rabbit pAb

Journal:Bioengineered

Application:WB

IF:3.26

Species:Homo sapiens

PMID:[34521301](#)

Title:E2F transcription factor 1 (E2F1) promotes the transforming growth factor TGF- β 1 induced human cardiac fibroblasts differentiation through promoting the transcription of CCNE2 gene

References for Collagen I/COL1A1 Rabbit pAb

Product:Collagen I/COL1A1 Rabbit pAb

Journal:Journal of materials chemistry. B

Application:IHC

IF:6.33

Species:Homo sapiens

PMID:[33491723](#)

Title:Substrate stiffness and sequence dependent bioactive peptide hydrogels influence the chondrogenic differentiation of human mesenchymal stem cells

References for Collagen I/COL1A1 Rabbit pAb

Product:Collagen I/COL1A1 Rabbit pAb

Journal:PeerJ

Application:WB

IF:2.98

Species:Mus musculus

PMID:[35582617](#)

Title:Curcumin alleviates liver fibrosis by inducing endoplasmic reticulum stress-mediated necroptosis of hepatic stellate cells through Sirt1/NICD pathway

References for Collagen I/COL1A1 Rabbit pAb

Product:Collagen I/COL1A1 Rabbit pAb

Journal:Biological trace element research

Application:WB

IF:Species:Mus musculus

PMID:[34251588](#)

Title:Protective effect of selenium-enriched green tea on carbon tetrachloride-induced liver fibrosis