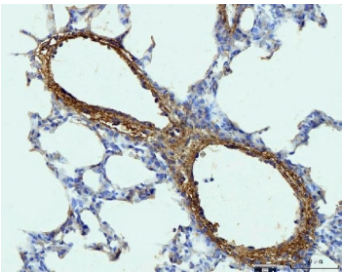
Collagen I Antibody / COL1A1 (R32436)

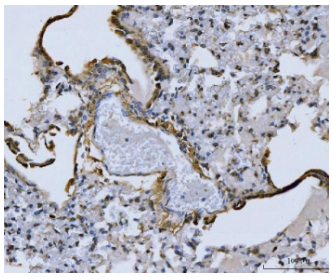
Catalog No.	Formulation	Size
R32436	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

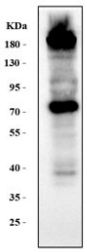
Availability	1-3 business days
Species Reactivity	Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2.5% Trehalose
UniProt	P11087
Localization	Cytoplasmic
Applications	Western Blot : 0.5-1ug/ml Immunohistochemistry (FFPE) : 2-5ug/ml
Limitations	This Collagen I antibody is available for research use only.



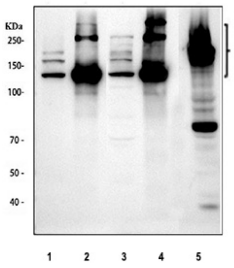
Collagen I Antibody Rat Lung IHC. IHC staining of FFPE rat lung tissue with Collagen I antibody demonstrated strong extracellular staining associated with vascular walls, perivascular connective tissue, and interstitial matrix components, consistent with the distribution of type I collagen within pulmonary supporting structures. Collagen I is the most abundant fibrillar collagen in vertebrate tissues and provides tensile strength, structural integrity, and mechanical support to connective tissues. The prominent staining observed surrounding blood vessels and within stromal regions highlights the role of collagen I in maintaining lung architecture and extracellular matrix organization. Heat-induced epitope retrieval was performed by boiling tissue sections in pH 8 EDTA buffer for 20 minutes and allowing them to cool before immunostaining. These results support the utility of Collagen I Antibody for studies of extracellular matrix biology, pulmonary fibrosis, tissue remodeling, and connective tissue development.



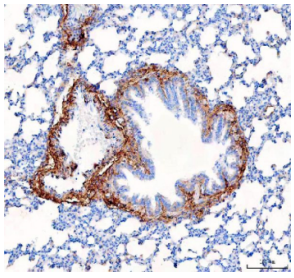
Collagen I Antibody Mouse Lung IHC. IHC staining of FFPE mouse lung tissue with Collagen I antibody demonstrated prominent extracellular staining along alveolar septa, connective tissue interfaces, and matrix-rich stromal regions, consistent with the distribution of type I collagen within the pulmonary extracellular matrix. Collagen I is the principal fibrillar collagen responsible for providing tensile strength and structural support to connective tissues throughout the body. The staining pattern highlights collagen-rich regions that contribute to maintenance of alveolar architecture and tissue integrity. Heat-induced epitope retrieval was performed by boiling tissue sections in pH 8 EDTA buffer for 20 minutes and allowing them to cool before immunostaining. These results support the utility of Collagen I Antibody for studies of extracellular matrix biology, pulmonary fibrosis, tissue remodeling, and connective tissue development.



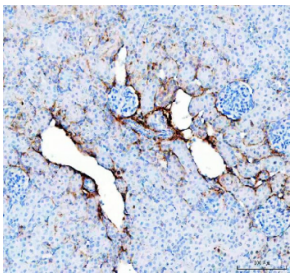
Collagen I Antibody Mouse NIH 3T3 WB. Western blot analysis of Collagen I expression was performed using anti-Collagen I antibody in mouse NIH 3T3 cell lysate. Collagen I is the most abundant fibrillar collagen in the extracellular matrix and is synthesized as a procollagen precursor that undergoes proteolytic processing to generate mature collagen molecules. A prominent immunoreactive band is detected at approximately 70-90 kDa, corresponding to the expected molecular weight range of mature Collagen I. Higher molecular weight species are also observed above 140 kDa, consistent with precursor procollagen forms. Strong expression in NIH 3T3 fibroblast cells is consistent with the established role of fibroblasts as major producers of extracellular matrix proteins and connective tissue components. These results support the utility of Collagen I Antibody for studies of extracellular matrix biology, fibrosis, connective tissue development, and tissue remodeling.



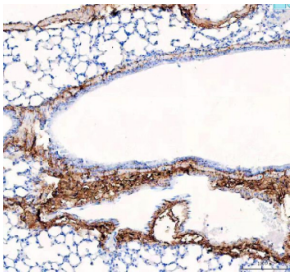
Collagen I Antibody Rodent Tissues and Fibroblasts WB. Western blot analysis of Collagen I expression was performed using anti-Collagen I antibody in rodent tissue and cell lysates. Lane 1: rat lung lysate. Lane 2: rat skin lysate. Lane 3: mouse lung lysate. Lane 4: mouse skin lysate. Lane 5: mouse NIH 3T3 cell lysate. Collagen I is the major fibrillar collagen of connective tissues and is synthesized as a high-molecular-weight procollagen precursor that undergoes proteolytic processing to generate mature collagen chains. Prominent immunoreactive bands are detected between approximately 140-210 kDa, corresponding to precursor procollagen forms, with additional bands observed in the expected mature collagen range of approximately 70-90 kDa. Strong expression in skin tissues and NIH 3T3 fibroblasts is consistent with the abundant production of type I collagen by fibroblasts and connective tissue cells. These results support the utility of Collagen I Antibody for studies of extracellular matrix biology, fibrosis, connective tissue development, wound healing, and tissue remodeling.



Collagen I Antibody Rat Lung IHC. IHC staining of FFPE rat lung tissue with Collagen I antibody demonstrated strong extracellular staining surrounding bronchiolar structures, vascular walls, and connective tissue-rich stromal regions, consistent with the distribution of type I collagen within the pulmonary extracellular matrix. Collagen I is the principal fibrillar collagen responsible for providing tensile strength, structural support, and mechanical stability to connective tissues. The prominent staining observed around airway and perivascular structures highlights the role of collagen I in maintaining lung architecture and extracellular matrix organization. Immunostaining was performed using an HRP-conjugated secondary antibody and DAB chromogen. Heat-induced epitope retrieval was achieved by boiling tissue sections in pH 8 EDTA buffer for 20 minutes and allowing them to cool before testing. These results support the utility of Collagen I Antibody for studies of extracellular matrix biology, pulmonary fibrosis, tissue remodeling, and connective tissue development.



Collagen I Antibody Rat Kidney IHC. IHC staining of FFPE rat kidney tissue with Collagen I antibody demonstrated strong extracellular staining associated with vascular structures, interstitial connective tissue, and basement membrane-adjacent stromal regions, consistent with the distribution of type I collagen within the renal extracellular matrix. Collagen I is the major fibrillar collagen responsible for providing structural support and tensile strength to connective tissues and plays an important role in maintaining tissue architecture. The staining pattern observed highlights matrix-rich regions that contribute to renal structural integrity and extracellular matrix organization. Immunostaining was performed using an HRP-conjugated secondary antibody and DAB chromogen. Heat-induced epitope retrieval was achieved by boiling tissue sections in pH 8 EDTA buffer for 20 minutes and allowing them to cool before testing. These results support the utility of Collagen I Antibody for studies of extracellular matrix biology, renal fibrosis, tissue remodeling, and connective tissue development.



Collagen I Antibody Mouse Lung IHC. IHC staining of FFPE mouse lung tissue with Collagen I antibody demonstrated strong extracellular staining along alveolar walls, peribronchial connective tissue, and vascular-associated stromal structures, consistent with the distribution of type I collagen within the pulmonary extracellular matrix. Collagen I is the principal fibrillar collagen responsible for providing tensile strength, structural support, and mechanical integrity to connective tissues. The prominent staining observed within matrix-rich regions surrounding airways and blood vessels highlights the essential role of collagen I in maintaining normal lung architecture and extracellular matrix organization. Immunostaining was performed using an HRP-conjugated secondary antibody and DAB chromogen. Heat-induced epitope retrieval was achieved by boiling tissue sections in pH 8 EDTA buffer for 20 minutes and allowing them to cool before testing. These results support the utility of Collagen I Antibody for studies of extracellular matrix biology, pulmonary fibrosis, tissue remodeling, and connective tissue development.

Description

Collagen I is the most abundant collagen type in the human body and a major structural component of the extracellular matrix. It is composed of two alpha-1 chains and one alpha-2 chain, forming a triple-helical structure that provides tensile strength and structural integrity to connective tissues. Collagen I is found in skin, bone, tendon, ligament, and cornea, where it plays a key role in maintaining tissue architecture and mechanical resilience.

Collagen I synthesis and organization are critical for normal development, wound healing, and tissue repair. Alterations in its expression or structure have been linked to fibrotic diseases, connective tissue disorders, and certain tumor microenvironments. Because of its widespread presence and biological importance, Collagen I is a central focus in studies of tissue biology, biomaterials, and regenerative medicine.

The **Collagen I antibody** is an essential tool for detecting Collagen I in applications such as immunohistochemistry, western blot, and immunofluorescence. Researchers use the Collagen I antibody from NSJ Bioreagents to assess extracellular matrix composition, monitor tissue remodeling, and evaluate fibrosis-related changes. With high specificity and consistent performance, the Collagen I antibody supports research in cell biology, pathology, and extracellular matrix biology.

Explore our Collagen I Antibody / Extracellular Matrix Protein Antibody page to learn more about type I collagen and its roles in connective tissue formation, extracellular matrix organization, and tissue remodeling.

Application Notes

Optimal dilution of the Collagen I antibody should be determined by the researcher.

Immunogen

Amino acids YDFSFLPQPPQEKSQDGGRYYRA were used as the immunogen for the Collagen I antibody.

Storage

After reconstitution, the Collagen I antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

References (1)

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