

Collagen I α 1 Propeptide Sequence Antibody
Rabbit polyclonal antibody
Catalog # AN1185**Specification**

Collagen I α 1 Propeptide Sequence Antibody - Product Information

Application	WB, IHC
Primary Accession	P02452
Reactivity	Human, Mouse
Host	Rabbit
Clonality	polyclonal
Calculated MW	180 KDa

Collagen I α 1 Propeptide Sequence Antibody - Additional Information

Gene ID	1277
Gene Name	COL1A1
Other Names	
Collagen alpha-1(I) chain, Alpha-1 type I collagen, COL1A1	

Target/Specificity

Synthetic peptide corresponding to amino acid residues specific to the collagen 1, alpha 1 propeptide conjugated to KLH.

Dilution

WB~~ 1:1000

IHC~~ 1:100

Format

Affinity purified

Antibody Specificity

Specific for the propeptide portion of the ~180 kDa collagen I α 1 polypeptide in human lung fibroblast extract. The antibody also 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, the antibody recognizes collagen I molecules that are still associated with the cells in which they were synthesized.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

Collagen I α 1 Propeptide Sequence Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Shipping

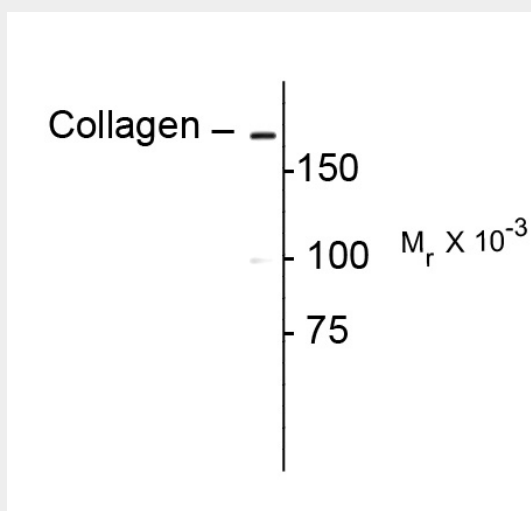
Blue Ice

Collagen I $\alpha 1$ Propeptide Sequence Antibody - Protocols

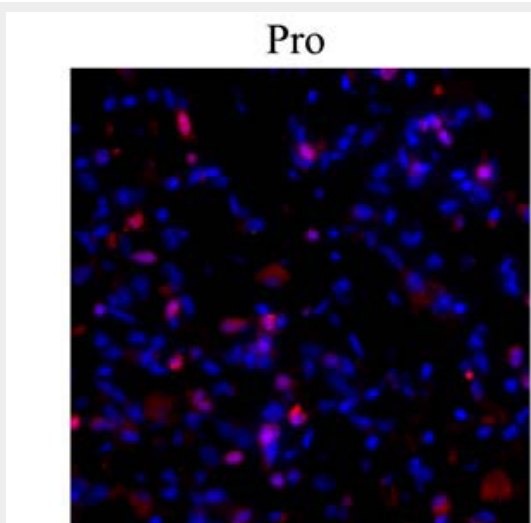
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Collagen I $\alpha 1$ Propeptide Sequence Antibody - Images



Western blot of rat lung lysate showing specific immunolabeling of the ~180 k collagen 1.



IHC of fibrotic mouse lung tissue showing specific staining of collagen I molecules (red) that are still associated with the cells in which they were synthesized.

Collagen I $\alpha 1$ Propeptide Sequence Antibody - Background

Collagen is an extracellular matrix protein that serves as a scaffold defining the shape and mechanical properties of many tissues and organs including skin, tendon, artery walls, fibrocartilage, bone and teeth. Type 1 collagen is the most abundant protein in mammals. Collagens are synthesized with N-terminal and C-terminal propeptides that are cleaved during maturation and secretion. After cleavage of the propeptides, the most N-terminal and C-terminal remaining sequences are known as telopeptides. Mutations in the collagen 1, alpha 1 gene (COL1A1) are known to cause osteogenesis imperfecta (aka brittle bone disease) (Byers 1989). Furthermore, mutations found in the first 90 residues of the helical region of alpha 1 collagen have been implicated in the prevention or delayed removal of the procollagen N-propeptide leading to a combined osteogenesis imperfecta and Ehlers-Danlos syndrome (EDS) phenotype (Cabral et al., 2005).

Collagen I α 1 Propeptide Sequence Antibody - References

Byers PH (1989) Inherited disorders of collagen gene structure and expression. Am J Med Genet. 34(1):72-80.

Cabral WA, Makareeva E, Colige A, Letocha AD, Ty JM, Yeowell HN, Pals G, Leikin S, Marini JC. (2005) Mutations near amino end of alpha1(I) collagen cause combined osteogenesis imperfecta/Ehlers-Danlos syndrome by interference with N-propeptide processing. J Biol Chem. 2005 May 13;280(19):19259-69.