

Rabbit Collagen 1, alpha 1 telopeptide Polyclonal Antibody | anti-COL1A1 antibody

Anti-Collagen I alpha1 Telopeptide Sequence

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA14236	Rabbit	Human, mouse, sheep	Western Blot, Immunohistochemistry

PRODUCT SYNONYMS

Collagen 1; alpha 1 telopeptide; Polyclonal Antibody; Anti-Collagen I alpha1 Telopeptide Sequence; anti-COL1A1 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, mouse, sheep
Clonality	Polyclonal
Specificity	Specific for the ~ 140 kDa telopeptide portion of the collagen I alpha1 polypeptide. The antibody works well for immunohistochemistry on paraformaldehyde-fixed sections with a simple antigen-retrieval protocol (incubate slides for 20 minutes at 90 degree 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 mature collagen I that has formed fibrils in the extracellular matrix.
Purity/Purification	Affinity Purified
Form/Format	Liquid in PBS. Contains no preservative.
Sequence Length	1464
Applicable Applications for anti-COL1A1 antibody	WB (Western Blot), IHC (Immunohistochemistry)
Application Notes	Quality Control: Western blots performed on each lot. WB: 1:1000 IHC: 1:100
Antigen	Synthetic peptide from the C-terminal region of human collagen I alpha1 telopeptide sequence.
Immunogen Information	Synthetic peptide corresponding to amino acid residues specific to the collagen 1, alpha 1 telopeptide conjugated to KLH
Immunogen Species	Human
Packaging	100 ul in PBS. Contains no preservative. Adequate amount of material to conduct 10-mini Western Blots.
Reactivity Assumed Based on 100% Sequence Homology	Most mammals, birds and amphibians
Species Reactivity Note	The 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 alpha1 polypeptide in all mammals, birds, and amphibians.

Biological Significance	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).
Preparation and Storage	Store at -20 degree C in undiluted aliquots; stable for up to six months after date of receipt. Avoid freeze/thaw cycles.

IMAGES



Application Data

ADDITIONAL INFORMATION

Related Product Information for anti-COL1A1 antibody	Rabbit polyclonal 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.

NCBI AND UNIPROT INFORMATION

NCBI GI #	110349772
NCBI GeneID	1277
NCBI Accession #	NP_000079.2
NCBI GenBank Nucleotide #	NM_000088.3
UniProt Accession #	P02452; O76045; P78441; Q13896; Q13902; Q13903; Q14037; Q14992; Q15176; Q15201; Q16050; Q59F64
Molecular Weight	140
NCBI Official Full Name	collagen alpha-1(I) chain preproprotein
NCBI Official Synonym Full Names	collagen, type I, alpha 1
NCBI Official Symbol	COL1A1
NCBI Official Synonym Symbols	OI4
NCBI Protein Information	collagen alpha-1(I) chain; collagen alpha-1(I) chain; alpha-1 type I collagen; pro-alpha-1 collagen type 1; collagen alpha 1 chain type I; collagen alpha-1(I) chain preproprotein; collagen of skin, tendon and bone, alpha-1 chain
UniProt Protein Name	Collagen alpha-1(I) chain
UniProt Gene Name	COL1A1
UniProt Entry Name	CO1A1_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/collagen-1-alpha-1-telopeptide-antibody-western-blot-immunohistochemistry-elisa/14236>