

## ARG52247 anti-Collagen I, alpha 1 propeptide (Procollagen I) antibody

Package: 50 µl  
Store at: -20°C

### Summary

Product Description	Rabbit Polyclonal antibody recognizes Collagen I, alpha 1 propeptide (Procollagen I)
Tested Reactivity	Hu, Ms, Rat
Predict Reactivity	Amph, Bird, Fsh, Mamm
Tested Application	ICC/IF, IHC-P, WB
Specificity	This antibody recognizes pro-collagen I, but not mature form of collagen I.
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	Pro-Collagen I
Species	Human
Immunogen	KLH-conjugated synthetic peptide corresponding to amino acid residues specific to the collagen I, alpha 1 propeptide.
Conjugation	Un-conjugated
Alternate Names	OI1; OI2; OI3; OI4; EDSC; Collagen alpha-1(I) chain; Alpha-1 type I collagen

### Application Instructions

Application table	Application	Dilution
	ICC/IF	Assay-dependent
	IHC-P	1:100
	WB	1:1,000
Application Note	<p>Specific for the propeptide portion of the ~180 kDa collagen I <math>\alpha 1</math> 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.</p> <p>* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.</p>	
Positive Control	Human lung; Mouse lung; Rat lung	
Observed Size	180- 210 kDa	

### Properties

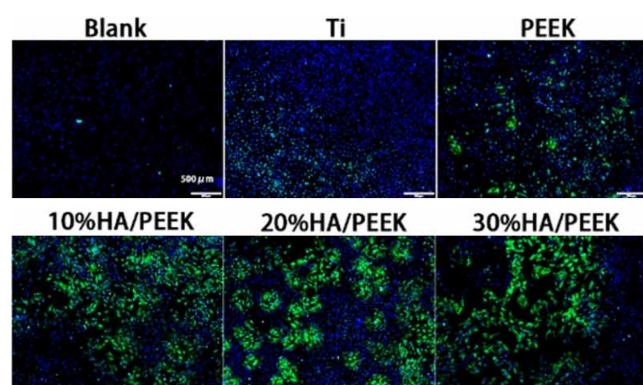
Form	Liquid
Purification	Affinity Purified

Buffer	PBS
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

## Bioinformation

Gene Symbol	COL1A1
Gene Full Name	collagen, type I, alpha 1
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).
Highlight	Related products: <a href="#">Collagen I antibodies</a> ; <a href="#">Pro-collagen I antibody</a> ;
Research Area	Signaling Transduction antibody
Calculated Mw	139 kDa
PTM	Proline residues at the third position of the tripeptide repeating unit (G-X-P) are hydroxylated in some or all of the chains. Proline residues at the second position of the tripeptide repeating unit (G-P-X) are hydroxylated in some of the chains. O-linked glycan consists of a Glc-Gal disaccharide bound to the oxygen atom of a post-translationally added hydroxyl group.

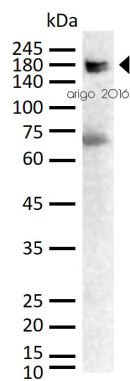
## Images



ARG52247 anti-Collagen I, alpha 1 propeptide (Procollagen I) antibody ICC/IF image

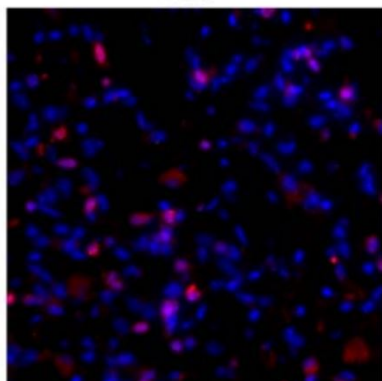
Immunofluorescence: Rat bone marrow mesenchymal stem cell stained with ARG52247 anti-Collagen I, alpha 1 propeptide (Procollagen I) antibody.

From Jiahao Chen et al. IOPscience (2023), [doi: 10.1088/1748-605X/ad0476](https://doi.org/10.1088/1748-605X/ad0476), Fig. 4f.



ARG52247 anti-Collagen I, alpha 1 propeptide (Procollagen I) antibody WB image

Western blot: 30 µg of Rat lung lysate stained with ARG52247 anti-Collagen I, alpha 1 propeptide (Procollagen I) antibody at 1:1000 dilution.



ARG52247 anti-Collagen I, alpha 1 propeptide (Procollagen I) antibody IHC image

Immunohistochemistry: Fibrotic Mouse lung tissue stained with ARG52247 anti-Collagen I, alpha 1 propeptide (Procollagen I) antibody showing specific staining of collagen I molecules (red) that are still associated with the cells in which they were synthesized.