



### Source

Human Pro-COL1A1 Protein, His Tag(PC1-H5243) is expressed from human 293 cells (HEK293). It contains AA Gln 23 - Pro 161 (Accession # [P02452](#)).  
 Predicted N-terminus: His

### Molecular Characterization

Poly-his Pro-COL1A1(Gln 23 - Pro 161)  
 P02452

This protein carries a polyhistidine tag at the N-terminus.

The protein has a calculated MW of 16.7 kDa. The protein migrates as 23-27 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under reducing (R) condition (SDS-PAGE) due to glycosylation.

### Endotoxin

Less than 0.01 EU per µg by the LAL method.

### Purity

>90% as determined by SDS-PAGE.

### Formulation

Lyophilized from 0.22 µm filtered solution in 50 mM Tris, 150 mM NaCl, pH7.5 with trehalose as protectant.

Contact us for customized product form or formulation.

### Reconstitution

Please see Certificate of Analysis for specific instructions.

*For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.*

### Storage

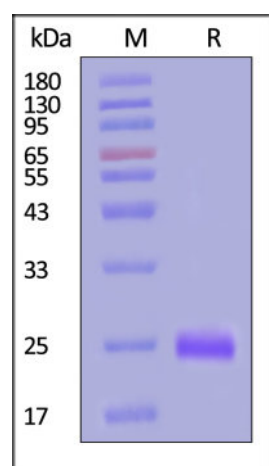
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*Please avoid repeated freeze-thaw cycles.*

This product is stable after storage at:

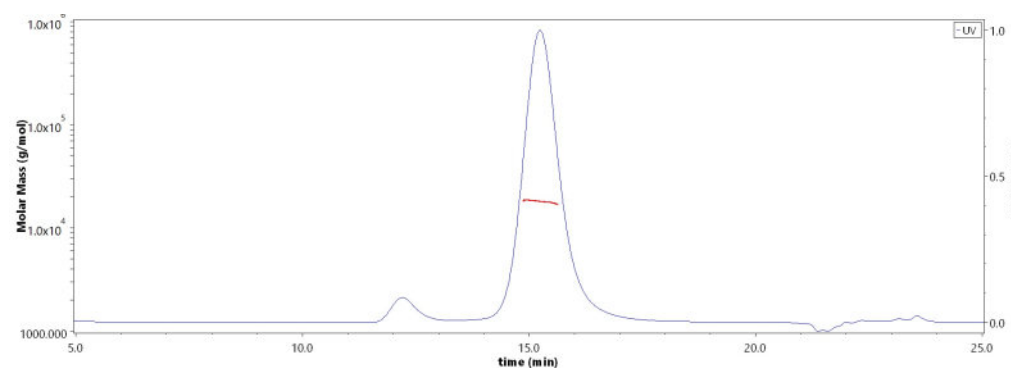
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

### SDS-PAGE



Human Pro-COL1A1 Protein, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With [Star Ribbon Pre-stained Protein Marker](#)).

### SEC-MALS



The purity of Human Pro-COL1A1 Protein, His Tag (Cat. No. PC1-H5243) is more than 85% and the molecular weight of this protein is around 15-25 kDa verified by SEC-MALS.

[Report](#)

### Background

Type I collagen is the most abundant structural protein of connective tissues such as skin, bone and tendon. It is synthesized as a procollagen molecule which is characterized by a 300 nm triple helical domain flanked by globular N- and C-terminal propeptides. The triple helical domain contains Gly-Xaa-Yaa triplets where Xaa and Yaa are frequently proline and hydroxyproline, respectively. The non-helical propeptides are removed by procollagen N- and C-proteinase activities so that

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## Human Pro-COL1A1 Protein, His Tag, low endotoxin (MALS verified)

Catalog # PC1-H5243



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the mature triple helices can self-assemble into collagen fibrils that provide tensile strength to tissues. Type I collagen is a heterotrimer that consists of two alpha 1(I) chains and one alpha 2(I) chain, although homotrimers consisting of three identical alpha 1(I) chains have also been described .

### Clinical and Translational Updates

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