

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

Catalog # CO1-H5243



Synonym

COL1A1

Source

Human COL1A1 Protein, His Tag (CO1-H5243) is expressed from human 293 cells (HEK293). It contains AA Leu 1229 - Leu 1464 (Accession # [P02452](#)).

Predicted N-terminus: His

Molecular Characterization

Poly-his

COL1A1(Leu 1229 - Leu 1464)
P02452

[Other Tags and Version Biotin & Other Labeled Version](#)

This protein carries a polyhistidine tag at the N-terminus.
The protein has a calculated MW of 28.9 kDa. The protein migrates as 30-33 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under reducing (R) condition (SDS-PAGE) due to glycosylation.
The protein is designed as a trimer.

Endotoxin

Less than 0.01 EU per µg by the LAL method / rFC method.

Purity

>90% as determined by SDS-PAGE.
>95% as determined by SEC-MALS.

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.

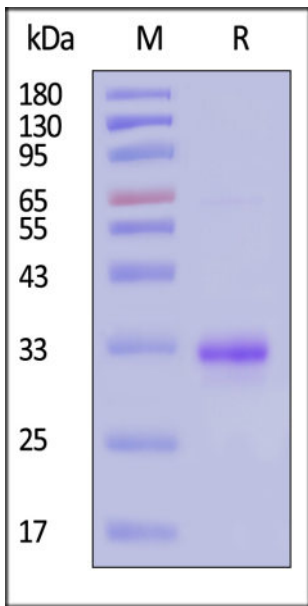
This product is stable after storage at:

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

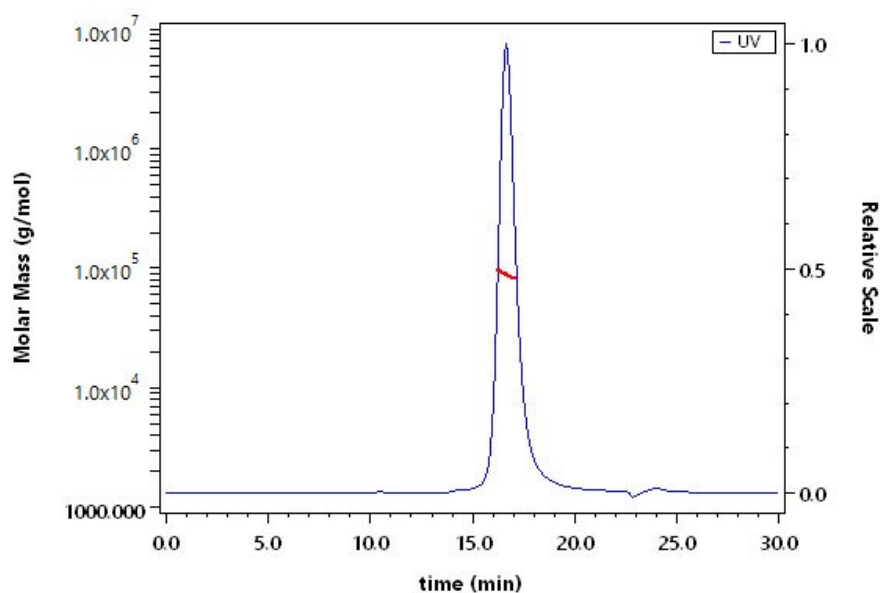
ACRO Quality Management System

- [QMS\(ISO, GMP\)](#).
- [Quality Advantages](#)
- [Quality Control Process](#)

SDS-PAGE



SEC-MALS



Human 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](#)).

The purity of Human COL1A1 Protein, His Tag (Cat. No. CO1-H5243) is more than 95% and the molecular weight of this protein is around 80-105 kDa verified by SEC-MALS.

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 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 .

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