

Recombinant Human Collagen II alpha 1/COL2A1 Protein

Catalog No.: RP01888

Sequence Information

Species **Gene ID**
Human 1280

Swiss Prot **Tags**
P02458-2 N-hFc

Synonyms

COL2A1, Collagen alpha-1(II) chain, Alpha-1 type II collagen, Cleaved into: Collagen alpha-1(II) chain, Chondrocalcin

Product Information

Source **Purification**
HEK293 cells ≥ 90% as determined by SDS-PAGE.

Calculated MW **Observed MW**
53.36 kDa 60-65 kDa

Endotoxin

< 0.01 EU/μg of the protein by LAL method

Formulation

Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.

Reconstitution

Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

Background

COL2A1 is the alpha-1 chain of type II collagen which is a fibrillar collagen found in cartilage and the vitreous humor of the eye. Mutations in this protein are associated with achondrogenesis, chondrodysplasia, early onset familial osteoarthritis, SED congenita, Langer-Saldino achondrogenesis, Kniest dysplasia, Stickler syndrome type I, and spondyloepimetaphyseal dysplasia Strudwick type. In addition, defects in processing chondrocalcin, a calcium binding protein that is the C-propeptide of this collagen molecule, are also associated with chondrodysplasia. There are two transcripts identified for this gene. Type II collagen is specific for cartilaginous tissues. Thus COL2A1 is essential for the normal embryonic development of the skeleton, for linear growth and for the ability of cartilage to resist compressive forces. The regulation of COL2A1, likely results from a balance of both positive and negative proteins. The inhibition of COL2A1 transcription following treatment of chick sternal chondrocytes with growth factors was accompanied by increased EF1 expression. Overexpression of EF1 in differentiated chondrocytes resulted in decreased expression of a reporter construct containing a collagen II promoter/enhancer insert.

Basic Information

Description

Recombinant Human Collagen II alpha 1/COL2A1 Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Asp1242-Leu1487) of Human Collagen II alpha 1/COL2A1 (Accession #NP_149162.2) fused with a hFc tag at the N-terminus.

Activity

Shipping

Lyophilized proteins are shipped at ambient temperature. Liquid proteins are shipped at frozen temperature with dry ice. Upon receipt, store it immediately at the temperature recommended below.

Storage

Store at -20°C

Operational Notes

For your safety and health, please wear a lab coat and disposable gloves for handling.

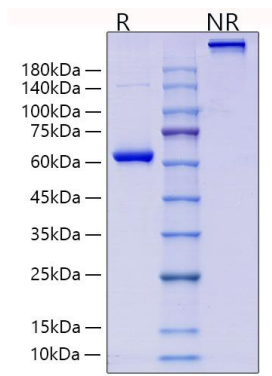
Contact

☎ | 400-999-6126

✉ | cn.market@abclonal.com.cn

🌐 | www.abclonal.com.cn

Validation Data



Recombinant Human Collagen II alpha 1/COL2A1 Protein was determined by SDS-PAGE under reducing (R) and non-reducing (NR) conditions.