Recombinant Human Collagen II alpha 1/COL2A1 Protein

Catalog No.: RP02991

Sequence Information

Species
Human

Gene ID
1280

Swiss Prot
P02458-2

Tags
N-His

Synonyms
ANFH; AOM; COL11A3; SEDC; STL1

Product Information

Source
HEK293 cells

Purification
≥ 95 % as determined by SDS-PAGE.

Calculated MW
28.25 kDa

Observed MW
35-40 kDa

Endotoxin
< 1 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 stablizer (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_001835.3) fused with a 6×His 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℃

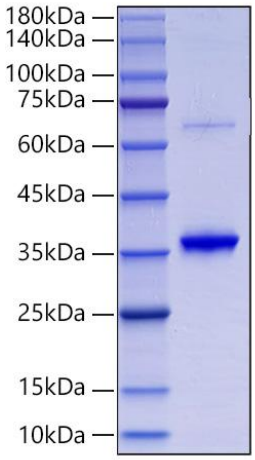
Operational Notes
For your safety and health, please wear a lab coat and disposable gloves for handling.

Contact

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For research use only. Not for therapeutic or diagnostic purposes.
Please visit http://abclonal.com for a complete listing of recommended products.

Validation Data



Recombinant Human Collagen II alpha 1/COL2A1 Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.