

Active Recombinant Human COL2A1 protein, His-tagged

Cat. No. COL2A1-26H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human COL2A1(Gln26-Arg266 & Gly957-Leu1487) fused with His tag at N-terminal was expressed in CHO.
Species	Human
Source	CHO
ProteinLength	26-266;957-1487 a.a.
Description	Type II collagen is an essential component of cartilage. It is essential for skeletal development and for the ability of cartilage to resist compressive forces. Type II collagen is a homotrimer of $\alpha 1(\text{II})$ chains. Defects in Type II collagen are the cause of numerous diseases, including chondrodysplasias and arthritis. This recombinant mini pro- $\alpha 1(\text{II})$ collagen consists of the N-terminal propeptide, 108 Gly-X-Y repeats, and the C-terminal propeptide. Proteolytic processing of the C-terminal propeptide by the procollagen C-proteinase (BMP-1) releases chondrocalcin, a calcium binding protein.
Predicted N Terminal	His & Asp1242
Form	Supplied as a 0.2 μm filtered solution in Tris and NaCl.
Bio-activity	Measured by the cleavage of its C-terminal propeptide by Recombinant Human BMP-1/PCP. >50% of full-length Pro-Collagen II is cleaved by Recombinant

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	Human BMP-1/PCP.
Molecular Mass	Predicted Molecular Mass: 78 kDa;SDS-PAGE: 92-100 kDa, 65-70 kDa, 36 kDa, reducing conditions.
Endotoxin	<1.0 EU per 1 µg of the protein by the LAL method.
Purity	>85%, by SDS-PAGE under reducing conditions and visualized by Colloidal Coomassie® Blue stain
Storage	Avoid repeated freeze-thaw cycles.6 months from date of receipt, -70 centigrade as supplied.3 months, -70 centigrade under sterile conditions after opening.

GENE INFORMATION

Gene Name	COL2A1 collagen, type II, alpha 1 [Homo sapiens]
Official Symbol	COL2A1
Synonyms	COL2A1; collagen, type II, alpha 1; collagen, type II, alpha 1 (primary osteoarthritis, spondyloepiphyseal dysplasia, congenital) , SEDC; collagen alpha-1(II) chain; chondrocalcin; cartilage collagen; alpha-1 type II collagen; collagen II, alpha-1 polypeptide; AOM; ANFH; SEDC; COL11A3; MGC131516;
Gene ID	1280
mRNA Refseq	NM_001844
Protein Refseq	NP_001835
MIM	

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UniProt ID	P02458
Chromosome Location	12q12-q13.2
Pathway	Amoebiasis, organism-specific biosystem; Amoebiasis, conserved biosystem; Axon guidance, organism-specific biosystem; Developmental Biology, organism-specific biosystem; ECM-receptor interaction, organism-specific biosystem; ECM-receptor interaction, conserved biosystem; Endochondral Ossification, organism-specific biosystem;
Function	extracellular matrix structural constituent conferring tensile strength; identical protein binding; platelet-derived growth factor binding;

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