

## Recombinant Porcine COL2A1 Protein(His Tag)

Catalog Number: PDMP100003

**Note:** Centrifuge before opening to ensure complete recovery of vial contents.

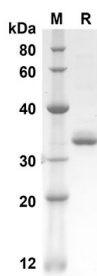
### Description

Species	Porcine
Source	Mammalian-derived Porcine COL2A1 proteins Ala1183-Leu1417, with an C-terminal His
Calculated MW	25.7 kDa
Observed MW	35 kDa
Accession	A0A286ZWS8
Bio-activity	Not validated for activity

### Properties

Purity	> 90% as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU/mg of the protein as determined by the LAL method
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80 °C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with 5% Trehalose and 5% Mannitol.
Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.5 mg/mL. Concentration is measured by UV-Vis.

### Data



SDS-PAGE analysis of Porcine COL2A1 proteins, 2 µg/lane of Recombinant Porcine COL2A1 proteins was resolved with an SDS-PAGE under reducing conditions, showing bands at 25.7KD

### Background

### For Research Use Only

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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 an 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 an 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 an 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.