

Native Bovine COL2A1 Protein

Cat. No. COL2A1-13B **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Immunization Grade Collagen type II (CII) protein, purified from fetal bovine articular cartilage, for the induction of arthritis in the Collagen-Induced Arthritis (CIA) model.
Species	Bovine
Source	Fetal bovine articular cartilage
Description	Type II collagen (CII) is a fibrillar collagen that is primarily located in cartilage tissue. The major molecular form of collagen in cartilage is type II collagen. Type II collagen is also located in the vitreous humor of the eye, the inner ear, the nose, and the intervertebral discs of the spine. The function of type II collagen is to provide tensile strength and give cartilage the ability to resist shearing forces. Mutations of the COL2A1 gene affect the synthesis of type II collagen and cause chondrodysplasias. This is characterized by abnormal cartilage that leads to bone and joint deformities. The degradation of collagen type II is an early indicator of osteoarthritis. Type II Collagen and Adjuvant Susceptibility to CIA is linked to MHC class II molecules and is dependent upon the species of type II collagen used for immunization. Various species of highly purified Type II Collagen are supplied lyophilized and in solution for use in the induction of arthritis in vivo.
Form	lyophilized
Molecular Mass	300 kDa
Purity	> 99% as determined by SDS-PAGE and visualized by Coomassie blue staining.

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Applications	Induction of Collagen-induced arthritis (CIA) in experimental animals.
Storage	Collagen dissolved in acetic acid is stable at 4 centigrade for 1 month. May be stored in dark at -20 centigrade for long term storage but will gradually degrade under neutral conditions.
Reconstitution	Reconstitute to 4 mg/mL with dilute acetic acid (1-100 mM). Dissolve using a micro stir-flea over a 24 hour period. Note: ensure that the stir plate does not cause vial to warm.
GENE INFORMATION	
Official Symbol	COL2A1
Synonyms	COL2A1; pro-alpha 1(II) chain; Achondrogenesis; Hypochondrogenesis; Spondyloepimetaphyseal dysplasia; Osteoarthritis (OA); Collagen Induced Arthritis (CIA); Collagen Type II

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