

Native Chicken COL2A1 Protein

Cat. No. COL2A1-15C Lot. No. (See product label)

SPECIFICATION

Product Overview Highest quality (>99%) Collagen type II (CII) protein, purified from chicken sternum, for the induction of arthritis in the Collagen-Induced Arthritis (CIA) model. Lyophilized. Can be reconstituted to desired concentration.

Species Chicken

Source Chick sternum

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, 10 mg/vial

Molecular Mass 300 kDa

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Purity	> 99% as determined by SDS-PAGE and visualized by Coomassie blue staining.
Applications	Used for the 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.
Concentration	Can be reconstituted to concentration of choice.
Reconstitution	Reconstitute to 4 mg/mL with dilute acetic acid (10-50 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; Spondyloepiphyseal dysplasia; Osteoarthritis (OA); Collagen Induced Arthritis (CIA); Collagen Type II

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