Immunization Grade Bovine Type XI Collagen, Lyophilized

Catalog # 1082

For Research Use Only - Not Human or Therapeutic Use

DESCRIPTION:

Type XI collagen is purified from pepsin-solubilized cartilage by repeat salt precipitation.

Type XI collagen is one of three types of collagen which make up cartilage fibrils and consists of three α-chains, α1 (XI), α2 (XI), and α3 (XI), where α3 (XI) is homologous to the α1 (II) chain of type II collagen (1).

NOTE: Type XI collagen shares significant similarities with type V collagen, which consists of α1 (V), α2 (V), and α3 (V) chains, but these alpha chains are not identical (2).

APPLICATION:

Use as an immunizing antigen to generate antibodies, an antigen to detect anti-type XI collagen antibodies in ELISA, or as a standard for gel analysis.

NOTE: Antibodies against type II collagen partially cross-react to type XI collagen due to the homology between α3 (XI) and α1 (II).

QUANTITY:

5 mg

FORM:

Lyophilized powder

SOURCE:

Bovine articular cartilage

MOLECULAR WEIGHT:

Intact type XI collagen: approximately 360 kDa. By 6% gel analysis, type XI collagen is separated into three α-chains: α1 (XI), α2(XI), and α3 (XI) (1052, 1478, and 1060 A.A. residues) from the top of the gel.

PURITY:

>90% by SDS-PAGE gel analysis

STORAGE:

4°C in the dark for lyophilized form and -20°C for solution form. Collagen may gradually degrade under neutral conditions.

STABILITY:

2 years

NOTES:

Type XI collagen can be dissolved at 4 mg/ml in an acidic solution such as 0.01-0.05M acetic acid, pH 3.0-3.3 or 0.15M citrate buffer, pH 3.6 by stirring at 4°C overnight. To neutralize the solution, add 10X neutral buffer containing 1.5M NaCl or dialyze the solution against a neutral buffer.

Chondrex, Inc. offers Cat # 9075, Collagen Solubilizing Buffer (0.05M acetic acid), as a companion product for dissolving or diluting collagen.

REFERENCES:

1. K. von der Mark, M. van Menxel, H. Wiedemann, Isolation and characterization of new collagens from Bovine cartilage. *Eur. J. Biochem.* **124**: 57-62 (1982)

2. R. Burgeson, P. Hebda, N. Morris, D. Hollister, Human cartilage collagens. Comparison of cartilage collagens with human type V collagen. *J Biol Chem* **257**, 7852-6 (1982).

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