

## Immunization Grade Chick Type XI Collagen, Lyophilized

Catalog # 1081

*For Research Use Only - Not Human or Therapeutic Use*

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| DESCRIPTION:      | <p>Type XI collagen is purified from pepsin-solubilized cartilage by repeat salt precipitation.</p> <p>Type XI collagen is one of three types of collagen which make up cartilage fibrils and consists of three <math>\alpha</math>-chains, <math>\alpha 1</math> (XI), <math>\alpha 2</math> (XI), and <math>\alpha 3</math> (XI), where <math>\alpha 3</math> (XI) is homologous to the <math>\alpha 1</math> (II) chain of type II collagen (1).</p> <p>NOTE: Type XI collagen shares significant similarities with type V collagen, which consists of <math>\alpha 1</math> (V), <math>\alpha 2</math> (V), and <math>\alpha 3</math> (V) chains, but these alpha chains are not identical (2).</p> |
| APPLICATION:      | <p>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.</p> <p>NOTE: Antibodies against type II collagen partially cross-react to type XI collagen due to the homology between <math>\alpha 3</math> (XI) and <math>\alpha 1</math> (II).</p>                                                                                                                                                                                                                                                                                                                                                        |
| QUANTITY:         | 5 mg                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| FORM:             | Lyophilized powder                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| SOURCE:           | Chick articular cartilage                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| MOLECULAR WEIGHT: | Intact type XI collagen: approximately 360 kDa. By 6% gel analysis, type XI collagen is separated into three $\alpha$ -chains: $\alpha 1$ (XI), $\alpha 2$ (XI), and $\alpha 3$ (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.                                                                                                                                                                                                                                                                                                                                                                                                   |
| REFERENCES:       | <ol style="list-style-type: none"><li>1. K. von der Mark, M. van Menxel, H. Wiedemann, Isolation and characterization of new collagens from chick cartilage. <i>Eur. J. Biochem.</i> <b>124</b>: 57-62 (1982)</li><li>2. R. Burgeson, P. Hebda, N. Morris, D. Hollister, Human cartilage collagens. Comparison of cartilage collagens with human type V collagen. <i>J Biol Chem</i> <b>257</b>, 7852-6 (1982).</li></ol>                                                                                                                                                                                                                                                                               |