



**SIGMA-ALDRICH**

3050 Spruce Street  
Saint Louis, Missouri 63103 USA  
Telephone 800-325-5832 • (314) 771-5765  
Fax (314) 286-7828  
email: techserv@sial.com  
sigma-aldrich.com

## Product Information

### Collagen from bovine achilles tendon

Product Number **C9879**

Storage Temperature 2-8 °C

#### Product Description

CAS Number: 9007-34-5

This product is suitable for use as a substrate for collagenase.<sup>1</sup> It is prepared by modification of the method of Einbinder and Schubert and is not suitable for use in coating glassware.<sup>2</sup>

This collagen is Bornstein and Traub Type I, not to be confused with Sigma's catalog type which is an organizational placeholder. The Type I classification of collagen is a component of skin, bone, tendon, and other fibrous connective tissues. Type I collagen differs from other collagens by their low lysine hydroxylation and low carbohydrate composition.

Collagen breaks down metabolically in the body to release N-telopeptide, which is the N-terminus of collagen. There is also C-telopeptide, which is presumably the C-terminus. N-telopeptide is released in urine, and its detection in diagnostic tests is used to screen for osteoporosis.

Although different types of collagen exist, they are all composed of molecules containing three polypeptide chains arranged in a triple helical conformation. Slight differences in the primary structure (amino acid sequence) establish differences between the types. The amino acid sequence of the primary structure is mainly a repeating motif with glycine in every third position and proline or 4-hydroxyproline frequently preceding the glycine residue.<sup>3,4</sup>

#### Precautions and Disclaimer

For Laboratory Use Only. Not for drug, household or other uses.

#### Preparation Instructions

This collagen preparation is insoluble in water, aqueous buffers, and organic solvents.

#### References

1. von Hippel, P.H., et al., J. Am. Chem. Soc., **82**, 2774 (1960).
2. Einbinder, J. and Schubert, M.J., J. Biol.Chem., **188**, 335 (1951).
3. Tanzer, M. L., Cross-linking of collagen. Science, **180(86)**, 561-566 (1973).
4. Bornstein, P., and Sage, H., Structurally distinct collagen types. Ann. Rev. Biochem., **49**, 957-1003 (1980).

JLH/RXR 5/06

Sigma brand products are sold through Sigma-Aldrich, Inc.

Sigma-Aldrich, Inc. warrants that its products conform to the information contained in this and other Sigma-Aldrich publications. Purchaser must determine the suitability of the product(s) for their particular use. Additional terms and conditions may apply. Please see reverse side of the invoice or packing slip.