

Product Information

Collagen

from human placenta
Bornstein and Traub Type I

Catalog Number **C7774**
Storage Temperature 2–8 °C

CAS RN 9007-34-5

Product Description

This collagen is classified as Bornstein and Traub Type I. This is not to be confused with Sigma's designation, here "Sigma Type VIII", which is an organizational placeholder.

Type I collagen is a component of skin, bone, tendon, and other fibrous connective tissues. Type I collagen differs from other collagens by its 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.^{1,2}

This product has been used to coat tissue culture plates, for various assays.^{3,4} It has also been used in microarrays⁵ and in biosensor chips.⁶ This product has also been utilized in native collagen zymography.⁷

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

This product is an acid-soluble collagen. It can be dissolved in 0.5 M acetic acid at 1 mg/ml. If necessary, solutions of this product may be heated to assist dissolution.

References

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5. Brafman, D.A. *et al.*, *Nat. Protoc.*, **7(4)**, 703-717 (2012).
6. Jiang, L., and Barclay, A.N., *Eur. J. Immunol.*, **39(4)**, 1167-1175 (2009).
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MWM,CMH,RXR,GCY,MAM 08/17-1