

**Product Name**

Monoclonal Mouse  
Anti-human type I collagen (Sigma-Aldrich, C5483)  
Immunoglobulin, clone 9D7

**CAT No.**

MQ 3.102-100

**Quantity**

100 µg

Edition: February 1, 2012

**Intended use**

This product is for research use only. NOT for use in diagnostic or therapeutic procedures.  
This product is tested for use in enzyme-linked immunosorbent assay (ELISA) or immunohistochemistry (IHC).

**Reagent provided**

The antibody is supplied in PBS, pH 7.2  
Antibody concentration: 0.5 mg/ml

**Isotype**

Mouse IgG1

**Immunogen**

Human type I collagen (Sigma-Aldrich, C5483)

**Specificity**

Specificity has been tested in ELISA and IHC (figure 1) (NOTE: FROZEN SECTIONS ONLY, Not reactive on paraffin-embedded tissue). Additional tests for cross reactivity have not yet been performed.

**Purity**

Protein A purified.

**Precautions**

1. For professional users.
2. As with any product derived from biological sources, proper handling procedures should be used.
3. The product may be used in different techniques and in combination with different sample types and materials, therefore each individual laboratory should validate the applied test system.

**Preparation of the antibody**

Use antibody as supplied.

**Storage instructions**

Store at 2-8°C.

For prolonged storage add sodium azide to 0.05%

**Dilution guidelines**

Optimum working dilutions of the product are not yet determined.

Unless the stability in the actual test system has been established, it is recommended to dilute the product immediately before use.

**Relevance**

Type I collagen is the most common of the collagens in vertebrates. It comprises up to 90% of the skeletons of the mammals and is also widespread all over the body. Such as: skin, tendons, ligaments, cornea, intervertebral disks, dentine, arteries and granulation tissues as the main locations. The importance of type I collagen for medical research is that it is involved in many human and animal diseases, including



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fibrosis, osteoporosis, cancer, atherosclerosis etc. Type I collagen is frequently utilized to monitor physiological changes in tissues as well as being used as diagnostic tools in various pathological conditions.

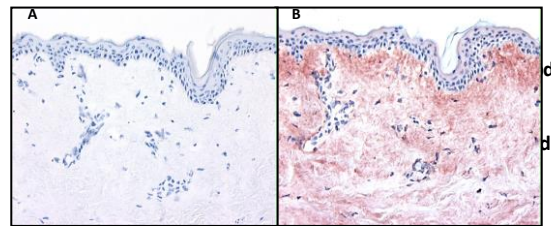


Figure 1: Frozen 4µm sections of normal human skin where incubated without primary antibody (A) or with anti-Type I collagen hybridoma culture supernatant (undiluted)(B). Goat anti-Mouse-biotin was used as secondary antibody and develop with 3-amino-9-ethylcarbazole (AEC) according to standard procedures. Type I collagen is shown as a red stain. e, epidermis; pd, papillary dermis; rd, reticular dermis.

**References**

1. Vuorio and Crombrughe. The family of collagen genes. *Annu. Rev. Biochem.* 1990;59: 837-872
2. Egeblad and Werb. New functions for the matrix metalloproteinases in cancer progression. *Nat. Rev. Cancer.* 2002;2: 161-174
3. Kielty et al. The Collagen family: Structure, assembly, and organization in the extracellular matrix. *In* *Connective tissue and its inheritable disorders*. P.M. Royce and B. Steinmann, editors. Wiley-Liss, New York. 1993; 103-147.