

Product Information

Anti-Collagen Type III antibody, Mouse monoclonal
clone FH-7A, purified from hybridoma cell culture

Product Number **SAB4200749**

Product Description

Anti-Collagen Type III antibody, Mouse monoclonal (mouse IgG1 isotype) is derived from the FH-7A hybridoma produced by the fusion of mouse myeloma cells and splenocytes from a BALB/c immunized mouse. Human Collagen Type III was used as the immunogen (GeneID: 1281). The isotype is determined by ELISA using Mouse Monoclonal Antibody Isotyping Reagents, Product Number ISO2. The antibody is purified from culture supernatant of hybridoma cells.

Monoclonal Anti-Collagen Type III specifically recognizes native and denatured Collagen Type III from human¹ and rat² origin. It does not recognize Collagen Types I, II, IV, V, VI and X. The antibody may be used in various immunochemical techniques including Immunoblotting (~70 kDa)¹, Immunofluorescence², Immunohistochemistry³ and ELISA.

The extracellular matrix (ECM) provides the physical microenvironment in which cells live and a substrate for cell anchorage. It also serves as a tissue scaffold and is a dynamic structure whose organization and composition modulate various cellular processes including cell proliferation, attachment, migration, differentiation and survival.² The composition of the extracellular framework of all vertebrates is dominated by the Collagen protein family, each member with unique features suited for its function and location.⁴⁻⁵ To date, 28 distinct collagen types have been identified.⁶ Fibrous collagens (Types I, II, III, V and XI) form the backbone of the collagen fibril bundles within the interstitial tissue stroma, whereas network collagens are incorporated into the basal membrane (BM).⁷ Fibrillar collagens are synthesized by a variety of cells, mostly of mesenchymal origin, such as fibroblasts, osteoblasts, odontoblasts and chondroblasts.

Collagen Type III, also known as COL3A1, Collagen alpha-1(III) chain, is a ~ 300 kDa molecule, found predominantly in skin, blood vessels, liver, placenta, tongue and thymus.⁴⁻⁵ Collagen Type III forms co-fibrils with Collagens Type I and V in a number of tissues of mesenchymal origin, such as skin, tendon, ligaments and bone.⁴ This protein is involved in several diseases, including Ehlers-Danlos type IV disease (vascular EDS), aortic and arterial aneurysms, collagenofibrotic

glomerulopathy (CG) and nail patella syndrome (NPS).^{3,8-9}

Monoclonal Anti-Collagen Type III antibody can serve a useful tool for examining the Collagen location and distribution within both normal and neoplastic tissues and for investigation of epithelial-mesenchymal interactions, tumorigenesis and basement membrane biology in ontogeny and epithelial differentiation.⁴

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody Concentration: ~ 1.0 mg/mL

Precautions and Disclaimer

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

Storage/Stability

Store at -20 °C. For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunohistochemistry: a working concentration of 10-20 µg/ml is recommended using heat-retrieved formalin-fixed, paraffin-embedded rat skin sections.

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working concentration by titration test.

References

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