

Product Information

Anti-Collagen Type I antibody, Mouse monoclonal
clone COL-1, purified from hybridoma cell culture

Product Number **SAB4200678**

Product Description

Anti-Collagen Type I (mouse IgG1 isotype) is derived from the hybridoma COL-1 produced by the fusion of mouse myeloma cells and splenocytes from BALB/c mice immunized with bovine skin collagen type I. 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.

Anti-Collagen Type I recognizes the native (helical) form of Collagen Type I. The antibody shows no cross-reactivity with collagen types II, III, IV, V, VI, VII, IX, X and XI. The product reacts with human, bovine, deer, pig and rat Collagen Type I.

The antibody may be used in various immunochemical techniques including Immunohistochemistry, ELISA, dot-blot and Immunoblotting (non-reducing conditions). In Immunohistochemical testing, acetone-fixation or unfixed frozen sections are recommended since the epitope recognized by the antibody is sensitive to formalin fixation and paraffin embedding.¹⁻⁷

In vertebrates, the extracellular matrix (ECM) of tissues and organs is mainly composed of 14 distinct collagen types, each with unique features suited for its function and location. The collagens are proteins composed of three subunit polypeptides, which interact to form a triple helix. Collagen Type I serves a structural role in the extracellular matrix by providing mechanical support and resistance to tension. Collagen Type I, the most abundant collagen, is widely distributed throughout the body and is synthesized mainly by fibroblasts, osteoblasts, odontoblasts and chondroblasts.

Mutations in Collagen Type I can cause directly or indirectly some severe genetic diseases such as the Osteogenesis Imperfecta and certain types of Ehlers-Danlos Syndrome. Antibodies against collagens including Anti-Collagen Type I has provided a powerful method for examining the distribution of connective tissue proteins, epithelial-mesenchymal interactions, tumorigenesis and basement membrane biology in ontogeny and epithelial differentiation.¹⁻⁷

Reagent

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

Antibody Concentration: ~ 1.0 mg/mL

Precautions and Disclaimer

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.

Storage/Stability

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 3.5-7 µg/mL is recommended using frozen sections of human tonsil or human tongue or pig tongue.

Immunoblotting: a working concentration of 1-2 µg/mL is recommended in non-reducing conditions using recombinant human collagen, expressed in *Nicotiana tabacum*, Product Number C7999.

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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