

DESCRIPTION

Species Reactivity	Human
Specificity	Detects recombinant human COL1 α 1 protein in Direct ELISA.
Source	Recombinant Monoclonal Rabbit IgG Clone # 3158C
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese Hamster Ovary-Derived recombinant human COL-1A1 Gln23-Lys277, Gly1094-Leu1464 Accession # P02452
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Type I collagen is the most abundant structural protein of connective tissues such as skin, bone and tendon. It is synthesized as a procollagen molecule which is characterized by a 300 nm triple helical domain flanked by globular N- and C-terminal propeptides (1). The triple helical domain contains Gly-Xaa-Yaa triplets where Xaa and Yaa are frequently proline and hydroxyproline, respectively. The non-helical propeptides are removed by procollagen N- and C-proteinase activities so that the mature triple helices can self-assemble into collagen fibrils that provide tensile strength to tissues (1). Type I collagen is a heterotrimer that consists of two α 1(I) chains and one α 2(I) chain, although homotrimers consisting of three identical α 1(I) chains have also been described (2). This recombinant mini pro- α 1(I) collagen consists of a shortened α 1(I) chain with following domain structure from N- to C-terminus: N-propeptide, N-telopeptide, the 33 most N-terminal Gly-Xaa-Yaa repeats, the 33 most C-terminal Gly-Xaa-Yaa repeats, C-telopeptide and C-propeptide. The preparation contains a mixture of the full-length molecule, pN collagen I(α 1) and the C-terminal propeptide. This truncated pro- α 1(I) collagen is a substrate for procollagen N-proteinase and procollagen C-proteinase.

References:

1. Canty, E.G. *et al.* (2005) J. Cell Sci. **118**:1341.
2. Han, S. *et al.* (2008) J. Mol. Biol. **383**:122.

PRODUCT SPECIFIC NOTICES

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