

## Collagen Type I Antibody

Rabbit Polyclonal Antibody to Collagen Type I

Catalog Number **R1038**

### Specificity:

Collagens are highly conserved throughout evolution and are characterized by an uninterrupted Glycine-X-Y triplet repeat that is a necessary part of the triple helical structure. For these reasons it is often extremely difficult to generate antibodies with specificities to collagens. The development of type specific antibodies is dependent on NON-DENATURED three-dimensional epitopes. Extensively purified collagens from human and bovine placenta and cartilage by limited pepsin digestion and selective salt precipitation were used for immunization. This preparation results in a native conformation of the protein. Antibodies are isolated from rabbit antiserum and are extensively cross-absorbed by immunoaffinity purification to produce type specific antibodies. Greatly diminished reactivity and selectivity of these antibodies will result if denaturing and reducing conditions of SDS-PAGE and immunoblotting are used. This product has been prepared by immunoaffinity chromatography using immobilized antigens followed by cross-absorption against other collagens, human serum proteins and non-collagen ECM-proteins to remove unwanted specificities. Crossreactivity < 1% to other collagens. Some class specific anti-collagens may be specific for three-dimensional epitopes which may result in diminished reactivity with denatured collagen or formalin-fixed, paraffin embedded tissues. This antibody reacts with most mammalian Type I collagens and has negligible cross-reactivity with Type II, III, IV, V or VI collagens. Non-specific cross reaction of anti-collagen antibodies with other human serum proteins or non-collagen extracellular matrix proteins is negligible.

### Immunogen:

Collagen type I purified from human and bovine placenta.

### Host:

Rabbit

### Uses and Dilutions:

Immunoblotting (1:5,000-1:10,000), immunoassay (1:4,000-1:8,000 using ABTS as substrate in a sandwich Elisa against 1 ug Collagen I) and immunohistochemistry (dilution 1:50-1:200 as a guide for frozen sections). For paraffin embedded sections pretreatment with 1 mg/ml pepsin in 0.5 M acetic acid for 2 h at 37 degrees Celsius followed by multiple buffer washes is recommended. This will improve staining, but due to epitope degradation staining will be weaker than in frozen sections and staining may differ from staining in cryosections.

Please note: all denaturing conditions will reduce reactivity and specificity of this antibody.

### Form:

0.1 ml of affinity purified Ig in 0.125M Borate, 0.075M Sodium Chloride, 0.005M EDTA, pH 8.0 containing 0.01% Sodium Azide as preservative.

### Concentration:

1 mg/ml

### Storage:

Store vial at 4 degrees Celsius prior to opening. This product is stable at 4 degrees Celsius as an undiluted liquid. Dilute only prior to immediate use. For extended storage mix with an equal volume of glycerol, aliquot contents and freeze at -20 degrees

### Limitations:

This product is for research use only and is not approved for use in humans or in clinical diagnosis.



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**Product References:**

1. Stefanovic B, Schnabl B, Brenner DA. (2002) Inhibition of collagen alpha 1(I) expression by the 5' stem-loop as a molecular decoy. *J. Biol. Chem.* 277:20, 18229-18237.
2. Hashimoto, N. et al. (2004) Bone marrow-derived progenitor cells in pulmonary fibrosis. *J. Clin. Invest.* 113:243-252.