

Datasheet for 600-401-107S**Collagen Type V Antibody****Overview**

Description:	Anti-Collagen Type V (RABBIT) Antibody - 600-401-107S
Item No.:	600-401-107S
Size:	25 µL
Applications:	Dot Blot, IHC, ELISA, IF
Reactivity:	Human, Bovine
Host Species:	Rabbit

Product Details

Background:	Rockland produces highly active antibodies and conjugates to collagens. 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. Rockland extensively purifies collagens for immunization from human and bovine placenta and cartilage by limited pepsin digestion and selective salt precipitation. This preparation results in a native conformation of the protein. Antibodies are isolated from rabbit antiserum and are extensively cross-adsorbed by immunoaffinity purification to produce 'type' specific antibodies. Greatly diminished reactivity and selectivity of these antibodies will result if denaturing and reducing conditions are used for SDS-PAGE and immunoblotting.
Synonyms:	rabbit anti-Collagen Type V antibody, COL5A1 protein antibody, Collagen fetal membrane A polypeptide antibody, Collagen alpha-1 (V) chain
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	COL5A1-COL5A3
Reactivity:	Human, Bovine

Immunogen Type:	Native Protein
Immunogen:	Collagen Type V from human and bovine placenta
Purity/Specificity:	This product has been prepared by immunoaffinity chromatography using immobilized antigens followed by extensive cross-adsorption against other collagens, human serum proteins and non-collagen extracellular matrix proteins to remove any unwanted specificities. 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 V collagens and has negligible cross-reactivity with Type I, II, III, IV or VI collagens. Non-specific cross reaction of anti-collagen antibodies with other human serum proteins or non-collagen extracellular matrix proteins is negligible.
Relevant Links:	• UniProtKB - P25940 • NCBI - NP_056534.2 • GeneID - 50509 • Anti-Collagen IHC Protocol • UniProtKB - P20908 • UniProtKB - P05997

Application Details

Tested Applications:	Dot Blot, IHC
Suggested Applications:	ELISA, IF (Based on references)
Application Note:	Anti-Collagen Type V has been tested by dot blot and IHC and is suitable by indirect trapping ELISA for quantitation of antigen in serum using a standard curve, immunoprecipitation, immunohistochemistry, native (non-denaturing, non-dissociating) PAGE, and western blotting for highly sensitive qualitative analysis.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:5,000 - 1:50,000
IHC:	1:50 - 1:200
IP:	1:100
WB:	1:1,000 - 1:10,000

Formulation

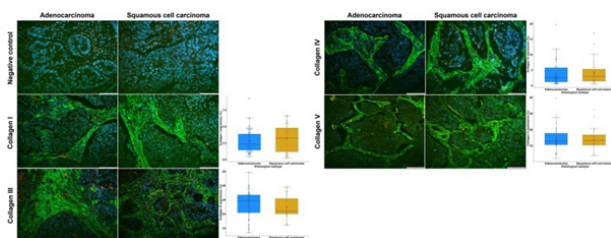
Physical State:	Liquid (sterile filtered)
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Concentration:	1.0 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

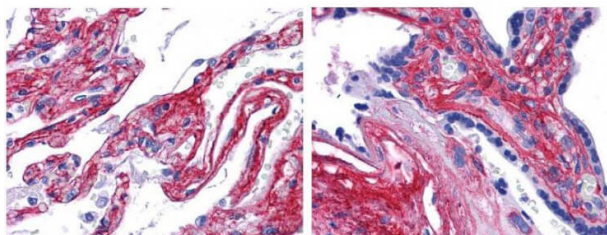
Shipping Condition:	Wet Ice
Storage Condition:	Store vial at 4° C or below prior to opening. This vial contains a relatively low volume of reagent (25 µL). To minimize loss of volume dilute 1:10 by adding 225 µL of the buffer stated above directly to the vial. Recap, mix thoroughly and briefly centrifuge to collect the volume at the bottom of the vial. Use this intermediate dilution when calculating final dilutions as recommended below. Store the vial at -20°C or below after dilution. Avoid cycles of freezing and thawing.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



Immunofluorescence Microscopy

Immunofluorescence expression of collagens in the extracellular matrix in lung adenocarcinoma and lung squamous cell carcinoma. The panel shows the negative control, collagen I, collagen III, collagen IV and collagen V. Also as presented the respectively box-plots show the differences of expression between the histological subtypes. The red square in the graphs represents the average expression of the marker for each of the groups. Magnification: 400×. Scale: 100 µm. Fig. 2. PMID: 39938232



Immunohistochemistry

Rockland anti collagen V antibody (600-401-107 Lot 22063, 1:200, 45 min RT) showed strong staining in FFPE sections of human lung (left) with strong staining within alveoli, vessels, and in connective tissue spaces; and placenta (right) with strong staining observed in stromal and connective tissue spaces and vessel walls. Slides were steamed in 0.01 M sodium citrate buffer, pH 6.0 at 99-100°C - 20 minutes for antigen retrieval. Images provided courtesy of LifeSpan Biosciences, Seattle, WA

References

- Baldavira CM et al. Matrisome analysis of NSCLC unveils clinically-important cancer-associated extracellular matrix changes. *Biochim Biophys Acta Mol Basis Dis.* (2025)
- Queiroz ZAJ et al. Type V Collagen as a Critical Regulator of Fibrillar Matrix Remodeling in a Murine Model of Systemic Sclerosis. *Cells.* (2025)
- Hikage F, Atkins S, Kahana A, Smith TJ, Chun TH. HIF2A-LOX Pathway Promotes Fibrotic Tissue Remodeling in Thyroid-Associated Orbitopathy. *Endocrinology.* (2019)
- Histol Histopathol. Long-term type 1 diabetes alters the deposition of collagens and proteoglycans in the early pregnant myometrium of mice. *Favaro RR, Raspantini PR, Salgado RM, Fortes ZB, Zorn TM.* (2015)
- Chun TH, Inoue M. 3-D adipocyte differentiation and peri-adipocyte collagen turnover. *Methods Enzymol.* (2014)
- Kaartinen MT et al. Cross-linking of osteopontin by tissue transglutaminase increases its collagen binding properties. *J Biol Chem.* (1999)

Disclaimer

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