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Datasheet for 600-401-108-0.1

Collagen Type VI Antibody

Overview

Description:	Anti-Collagen Type VI (RABBIT) Antibody - 600-401-108-0.1
Item No.:	600-401-108-0.1
Size:	100 µg
Applications:	Dot Blot, IHC, IF, Multiplex, WB
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 VI antibody, Collagen alpha-1 (VI) chain, Collagen VI antibody, Human mRNA for collagen VI alpha 1 C terminal globular domain antibody
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	COL6A1-COL6A3
Reactivity:	Human, Bovine

Immunogen Type:	Native Protein
Immunogen:	Collagen Type VI from human and bovine placenta
Purity/Specificity:	Anti-Collagen Type VI 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 VI collagens and has negligible cross-reactivity with Type I, II, III, IV or V collagens. Non-specific cross-reaction of anti-collagen antibodies with other human serum proteins or non-collagen extracellular matrix proteins is negligible.
Relevant Links:	• Anti-Collagen IHC Protocol • UniProtKB - P12111 • UniProtKB - P12110 • NCBI - AAH52575.1 • UniProtKB - P12109 • GeneID - 1291

Application Details

Tested Applications:	Dot Blot, IHC
Suggested Applications:	IF, Multiplex, WB (Based on references)
Application Note:	Anti-Collagen Type VI has been tested by dot blot and IHC-P and is suitable for indirect trapping ELISA for quantitation of antigen in serum using a standard curve, immunoprecipitation, native (non-denaturing, non-dissociating) PAGE, immunohistochemistry, 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 - 1:20,000
IHC:	1:50 - 1:200
IP:	1:100
WB:	1:500 - 1:5,000

Formulation

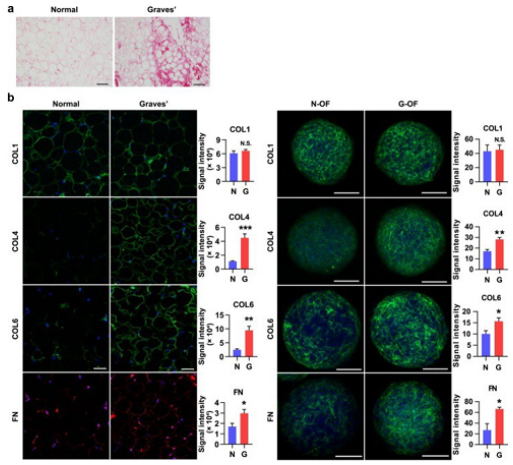
Physical State:	Liquid (sterile filtered)

Concentration:	1.19 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

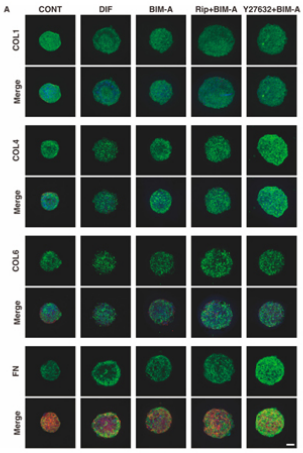
Shipping & Handling

Shipping Condition:	Wet Ice
Storage Condition:	Store vial at 4° C prior to opening. This product is stable at 4° C 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° C or below. Avoid cycles of freezing and thawing.
Expiration:	Expiration date is one (1) year from date of receipt.

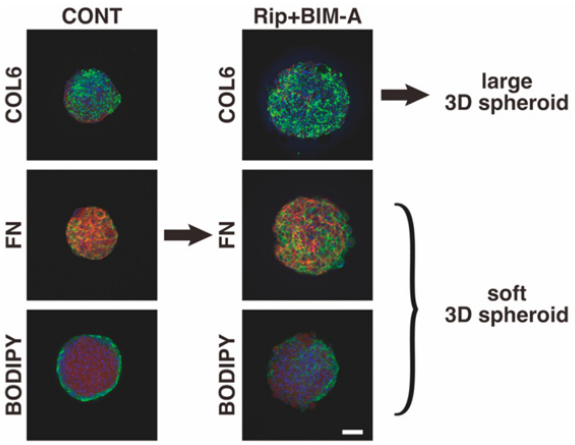
Images



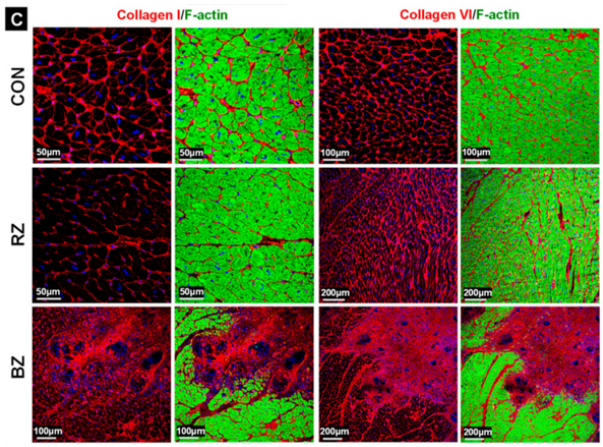
Immunofluorescence Microscopy
Unique ECM deposition in GO tissues and GO-derived OF organoids. (a) Representative Sirius red staining of periocular adipose tissues in control (normal) and GO (Graves). Scale bars, 100 µm. (b) Representative immunofluorescent staining of collagens (green) and FN (red or green) with DAPI (blue) in control and Graves orbital adipose tissues (left, n = 4 to 5) and 3D organoids reconstituted from hOFs isolated from respective tissues (right). Signal intensities were quantified per spheroid. n = 5 to 8 organoids. Scale bars, 50 µm (left) and 100 µm (right). G indicates G-OF; N indicates N-OF. *P < 0.05, unpaired Student t test (n = 4 in each group). Fig 2. PMID: 30388216



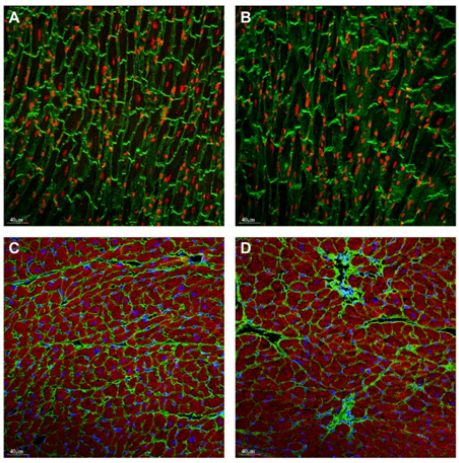
Immunofluorescence Microscopy
Representative confocal images showing the expression of ECMs in 3D 3T3-L1 spheroids under several sets of conditions. (A) On Day 7, the 3D cultures of spheroids of 3T3-L1 preadipocytes as the control (CONT), and their adipogenic differentiation in the absence (DIF) or presence of 100 nM bimatoprost free acid (BIM-A) and/or 10 μM ROCK-i (Rip or Y27632), were immunostained with specific antibodies of ECMs designated by the green color. Scale bar: 100 μm. Fig 9.
PMID: 36421103



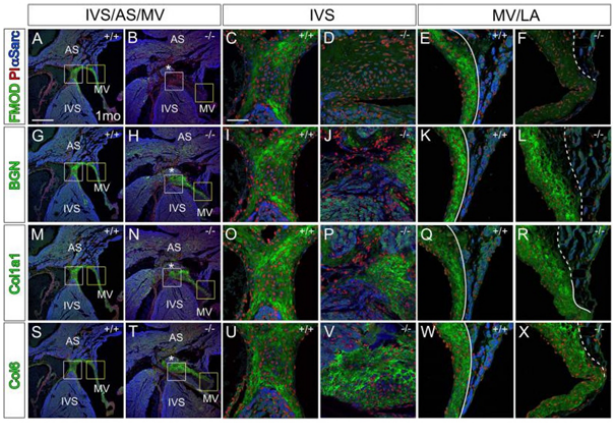
Immunofluorescence Microscopy
Hypothetical model of the mechanism responsible for inducing huge-sized and soft 3D spheroids caused by the addition of Rip to BIM-A. Fig 10.
PMID: 36421103



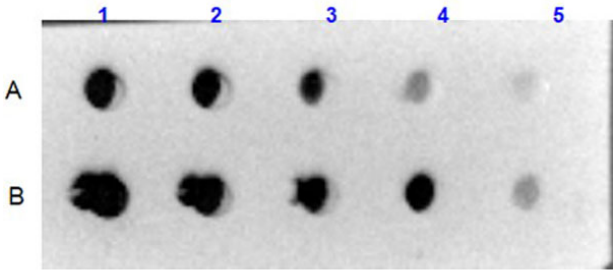
Immunofluorescence Microscopy
(C) Staining of collagen I and VI mark fibrotic areas. For comparison, the control (CON) tissue is shown. Border zone (BZ) is the myocardial area surrounding the granuloma and remote zone (RZ) is the myocardium distant to granuloma. The nuclei are stained blue with DAPI. Fig 1. PMID: 33923774



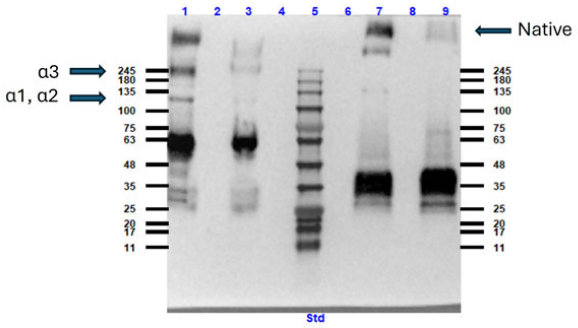
Immunofluorescence Microscopy
Representative vinculin staining (green) in WT (PBS) mice (A) and WT doxorubicin (B). Nuclei (red) were visualized with draq5. Replacement fibrosis was detected in the doxorubicin treated hearts (D) but not in vehicle hearts (C), visualising with the anti-collagen VI antibody (green). Nuclei (blue) were visualised with DAPI, (E, F). Fig 2. PMID: 28662206



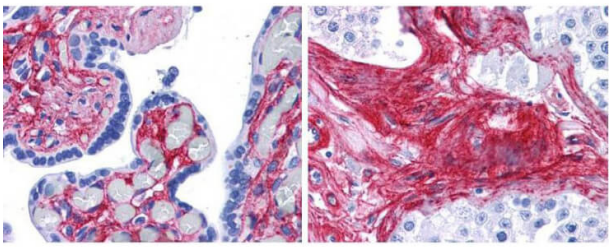
Immunofluorescence Microscopy
Immunolocalization of FMOD (green, A-F), BGN (green, G-L), Col1a1 (green, M-R), and Col6 (green, S-X) in Fmod+/+ (A, C, E, G, I, K, M, O, Q, S, U, W) and Fmod−/− (B, D, F, H, J, L, N, P, R, T, V, X) mitral leaflet attachments. White boxes in A, B, G, H, M, N, S, T are magnified in panels C, D, I, J, O, P, U, V respectively. Yellow boxes in A, B, G, H, M, N, S, T are magnified and shown in E, F, K, L, Q, R, W, X respectively. Red- propidium iodide (PI); blue- α-sarcomeric actin (αSarc); IVS-interventricular septum; AS- atrial septum; MV- mitral valve; LA- left atrium; solid lines- distinct separation of MV and LA; dashed lines- diffuse attachment of left atrial to MV. Scale bars: A= 400µm applies to B, G, H, M, N, S, T; C= 50µm applies to D-F, I-L, O-R, U-X. Fig 3. PMID: 27503167



Dot Blot
Dot Blot results using Rabbit Anti-Collagen VI Antibody.
Sample: A) Human Collagen VI (p/n 009-001-108), B) Bovine/Human Collagen VI (p/n 001-001-108).
Load: 1) 1000ng, 2) 333.33ng, 3) 111.11ng, 4) 37.03ng, 5) 12.35ng.
Primary Antibody: Rabbit Anti-Collagen VI antibody (p/n 600 -401-108) at 5µg/mL at RT for 1hr.
Secondary Antibody: Goat Anti-Rabbit IgG HRP Conjugated (p/n 611-1302) 1:40,000 at RT for 30mins.
Blocking: BlockOut® Universal Blocking Buffer (p/n MB-073) at RT for 30mins.



Western Blot
Western blot results using Rabbit Anti-Collagen Type VI Antibody.
Lane: 1) Human Collagen Type VI (p/n 009-001-108) reduced and boiled, 3) Human Collagen Type VI reduced and not boiled,5) Opal prestain molecular weight marker (p/n MB-210-0500), 7) Human Collagen Type VI not reduced and boiled, 9) Human Collagen Type VI not reduced and not boiled.
Lanes 2, 4, 6, 8 blank.
Load: 10µg.
Primary Antibody: Rabbit Anti-Collagen Type VI Antibody (p/n 600-401-108) 1:500 overnight at 2-8°C.
Secondary Antibody: Goat anti-Rabbit IgG HRP conjugated (p/n 611-1302) 1:40,000 at RT for 30mins.
Blocking: BlockOut® Universal Blocking Buffer (p/n MB-073) at RT for 1hr.



Immunohistochemistry
Rockland anti collagen VI antibody (600-401-108 Lot 26009, 1:400 45 min RT) showed strong staining in FFPE sections of human placenta (Left) with red staining of stromal and extracellular spaces, and in testis (Right) with staining of extracellular spaces between seminiferous tubules). 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

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