

# Anti-Collagen IV antibody ab6586

★★★★★ 97 Abreviews 366 References 画像数 8

## 製品の概要

<b>製品名</b>	Anti-Collagen IV antibody
<b>製品の詳細</b>	Rabbit polyclonal to Collagen IV
<b>由来種</b>	Rabbit
<b>特異性</b>	ab6586 is designed to bind specifically to NATIVE collagen epitopes composed of multiple subunit strands. Negligible cross-reactivity with Type I, II, III, 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.
<b>アプリケーション</b>	<b>適用あり:</b> ELISA, IHC-Fr, IP, WB, ICC/IF, IHC-P, IHC-FrFl, IHC-FoFr
<b>種交差性</b>	<b>交差種:</b> Mouse, Rat, Hamster, Cow, Dog, Human, Pig, Zebrafish, African green monkey, Chinese hamster, Syrian hamster <b>交差が予測される動物種:</b> Mammals ▲
<b>免疫原</b>	Full length native protein (purified) corresponding to Collagen IV. Collagen Type IV from human and bovine placenta. The immunogen maintains the native conformation of the protein.
<b>ポジティブ・コントロール</b>	Natural Human Collagen IV protein ( <a href="#">ab7536</a> ) can be used as a positive control in WB. human epidermal keratinocytes lysate
<b>特記事項</b>	At least 11 genetically distinct gene products are collectively referred to as 'collagen types' or other proteins and proteoglycans of the extracellular matrix. In humans, collagens are composed of about 20 unique protein chains which under go various types of post-translational modifications and are ultimately assembled into a triple helix. This results in great diversity between collagen types. 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. This preparation results in a native conformation of the protein.  This antibody is well suited to detect extracellular matrix proteins in normal as well as disease state tissues. Disruption of tissue organization is the hallmark of neoplasia. Malignant lesions can be distinguished from benign by examining the breakdown of basement membranes and loss of 3-dimensional architecture. Malignant cells are presumed to use matrix metalloproteases to degrade barriers created by the extracellular matrix which then allows metastasis to occur. Collagenases, stomelysins and gelatinases can collectively degrade all of the various components of the extracellular matrix, including fibrillar and non-fibrillar collagens and basement membrane glycoproteins.

Abcam recommended secondaries - Goat Anti-Rabbit HRP ([ab205718](#)) and Goat Anti-Rabbit Alexa Fluor® 488 ([ab150077](#)).

See other [anti-rabbit secondary antibodies](#) that can be used with this antibody.

## 製品の特性

製品の状態	Liquid
保存方法	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
バッファー	pH: 8.00 Preservative: 0.01% Sodium azide Constituents: 4.7625% Sodium borate, 0.146% EDTA, 0.435% Sodium chloride
精製度	Immunogen affinity purified
特記事項 (精製)	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.
一次抗体 備考	This antibody is well suited to detect extracellular matrix proteins in normal as well as disease state tissues. Disruption of tissue organization is the hallmark of neoplasia. Malignant lesions can be distinguished from benign by examining the breakdown of basement membranes and loss of 3-dimensional architecture. Malignant cells are presumed to use matrix metalloproteases to degrade barriers created by the extracellular matrix which then allows metastasis to occur. Collagenases, stomelysins and gelatinases can collectively degrade all of the various components of the extracellular matrix, including fibrillar and non-fibrillar collagens and basement membrane glycoproteins.
ポリ/モノ	ポリクローナル
アイソタイプ	IgG

## アプリケーション

Our [Abpromise guarantee](#) covers the use of **ab6586** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

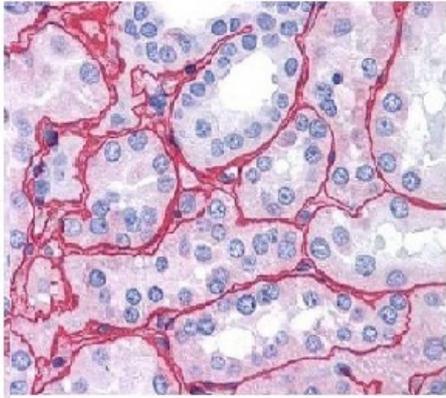
アプリケーション	Abreviews	特記事項
ELISA		1/5000 - 1/50000.
IHC-Fr	★★★★★	1/50 - 1/200.
IP	★★★★★	1/100.
WB	★★★★★	1/1000 - 1/10000. Use under non reducing condition. Predicted molecular weight: 160 kDa. This product is not recommended for use under denaturing conditions in WB, IP, and ELISA. We would suggest testing it under native conditions.
ICC/IF	★★★★★	Use at an assay dependent concentration. PubMed: 19933193

アプリケーション	Abreviews	特記事項
IF		Use at an assay dependent concentration. PubMed: 28153846
IHC-P	★★★★★	1/500. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.
IHC-FrFI	★★★★★	Use at an assay dependent concentration.
IHC-FoFr	★★★★★	Use at an assay dependent concentration.

## ターゲット情報

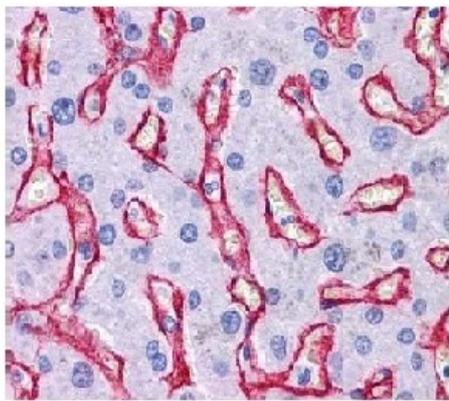
機能	Type IV collagen is the major structural component of glomerular basement membranes (GBM), forming a 'chicken-wire' meshwork together with laminins, proteoglycans and entactin/nidogen. Arresten, comprising the C-terminal NC1 domain, inhibits angiogenesis and tumor formation. The C-terminal half is found to possess the anti-angiogenic activity. Specifically inhibits endothelial cell proliferation, migration and tube formation. Inhibits expression of hypoxia-inducible factor 1alpha and ERK1/2 and p38 MAPK activation. Ligand for alpha1/beta1 integrin.
組織特異性	Highly expressed in placenta.
関連疾患	Defects in COL4A1 are a cause of brain small vessel disease with hemorrhage (BSVDH) [MIM:607595]. Brain small vessel diseases underlie 20 to 30 percent of ischemic strokes and a larger proportion of intracerebral hemorrhages. Inheritance is autosomal dominant. Defects in COL4A1 are the cause of hereditary angiopathy with nephropathy aneurysms and muscle cramps (HANAC) [MIM:611773]. The clinical renal manifestations include hematuria and bilateral large cysts. Histologic analysis revealed complex basement membrane defects in kidney and skin. The systemic angiopathy appears to affect both small vessels and large arteries. Defects in COL4A1 are a cause of porencephaly familial (PCEPH) [MIM:175780]. Porencephaly is a term used for any cavitation or cerebrospinal fluid-filled cyst in the brain. Porencephaly type 1 is usually unilateral and results from focal destructive lesions such as fetal vascular occlusion or birth trauma. Type 2, or schizencephalic porencephaly, is usually symmetric and represents a primary defect or arrest in the development of the cerebral ventricles.
配列類似性	Belongs to the type IV collagen family. Contains 1 collagen IV NC1 (C-terminal non-collagenous) domain.
ドメイン	Alpha chains of type IV collagen have a non-collagenous domain (NC1) at their C-terminus, frequent interruptions of the G-X-Y repeats in the long central triple-helical domain (which may cause flexibility in the triple helix), and a short N-terminal triple-helical 7S domain.
翻訳後修飾	Lysines at the third position of the tripeptide repeating unit (G-X-Y) are hydroxylated in all cases and bind carbohydrates. Prolines at the third position of the tripeptide repeating unit (G-X-Y) are hydroxylated in some or all of the chains. Type IV collagens contain numerous cysteine residues which are involved in inter- and intramolecular disulfide bonding. 12 of these, located in the NC1 domain, are conserved in all known type IV collagens. The trimeric structure of the NC1 domains is stabilized by covalent bonds between Lys and Met residues. Proteolytic processing produces the C-terminal NC1 peptide, arresten.
細胞内局在	Secreted > extracellular space > extracellular matrix > basement membrane.

## 画像



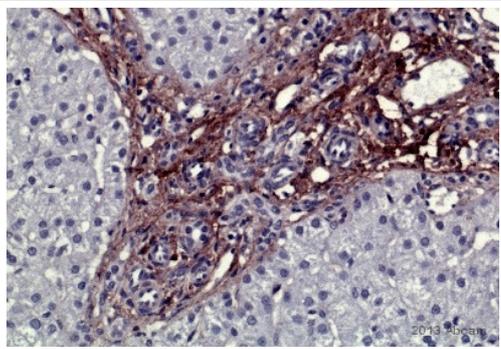
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Collagen IV antibody (ab6586)

Paraffin-embedded human kidney tissue stained for Collagen IV using ab6586 at 1/400 dilution in immunohistochemical analysis with strong staining observed in glomeruli.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Collagen IV antibody (ab6586)

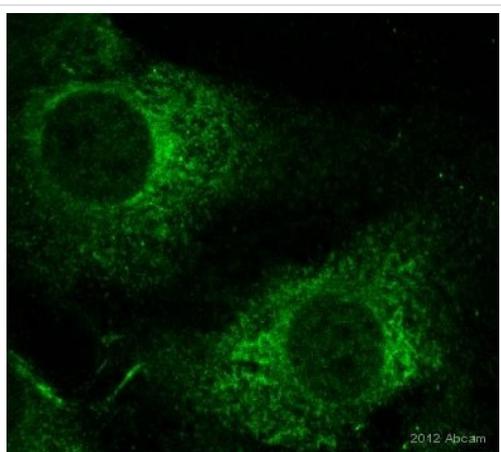
Paraffin-embedded human liver tissue stained for Collagen IV using ab6586 at 1/400 dilution in immunohistochemical analysis, strong staining was observed in the sinusoids.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Collagen IV antibody (ab6586)

This image is courtesy of an anonymous Abreview

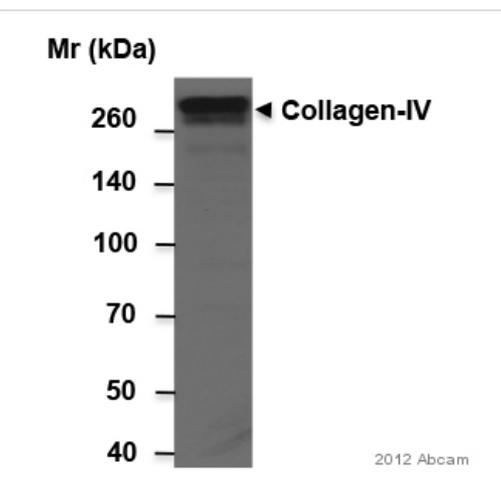
ab6586 staining Collagen IV in Dog liver tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 5% serum for 30 minutes at 25°C; antigen retrieval was by heat mediation in a 10mM citrate buffer, pH 6.0. Samples were incubated with primary antibody (1/200 in PBS + 1x casein) for 1 hour at 37°C. An undiluted HRP-conjugated Horse anti-rabbit IgG polyclonal was used as the secondary antibody.



Immunocytochemistry/ Immunofluorescence - Anti-Collagen IV antibody (ab6586)

This image is courtesy of an anonymous Abreview

Immunocytochemical analysis of Mouse 3T3 cell labeling Collagen IV with ab6586 at 1/250 dilution



Western blot - Anti-Collagen IV antibody (ab6586)

This image is courtesy of an anonymous Abreview

Anti-Collagen IV antibody (ab6586) at 1/1000 dilution + Baby Hamster Kidney fibroblasts at 100 µg

**Secondary**

HRP-conjugated donkey anti-rabbit polyclonal IgG at 1/4000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

**Predicted band size:** 160 kDa

**Observed band size:** 300 kDa

[why is the actual band size different from the predicted?](#)

**Exposure time:** 10 seconds

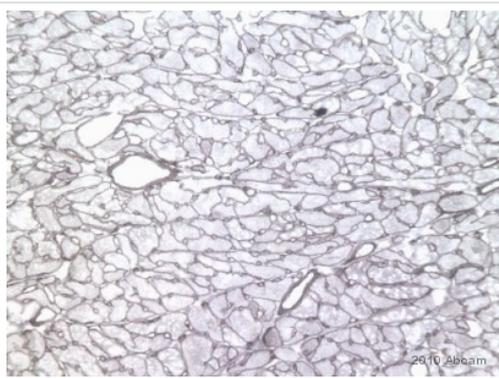
Blocked with 5% milk



Immunohistochemistry (Frozen sections) - Anti-Collagen IV antibody (ab6586)

This image is courtesy of an anonymous Abreview

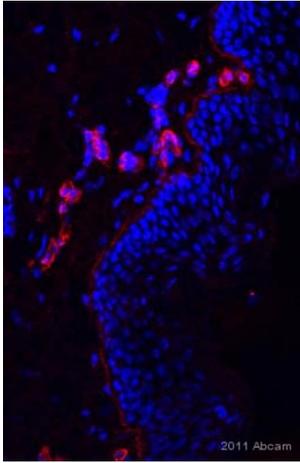
ab6586 staining rat brain tissue sections ([ab4616](#)) by IHC-Fr. Sections were acetone fixed and blocked with 1% serum for 20 minutes at 25°C. The primary antibody was diluted 1/300 and incubated with the sample for 30 minutes at 25°C. A biotinylated goat anti-rabbit IgG antibody was used as the secondary.



Immunohistochemistry (Frozen sections) - Anti-Collagen IV antibody (ab6586)

This image is courtesy of an anonymous Abreview.

ab6586 staining Collagen IV in heart tissue by Immunohistochemistry (Frozen sections). The sections were fixed in Acetone prior to blocking with 100% SuperBlock Blocking Buffer for 20 mins at 23°C. The primary antibody was diluted 1/50 and incubated with the sample for 12 hours at 4°C. [ab6720](#) was used as the secondary antibody, diluted 1/100.



Immunohistochemistry (Frozen sections) - Anti-Collagen IV antibody (ab6586)

Image courtesy of Daniel Holod-Betz by Abreview.

ab6586 staining Collagen IV in pig epithelial tissue by Immunohistochemistry (Frozen sections).

Tissue was fixed in acetone then incubated with ab6586 at a 1/200 dilution for 1 hour at 25°C. The secondary used was ab96886, a goat polyclonal to rabbit IgG - H&L (DyLight® 649), used at a 1/500 dilution.

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

#### Our Abpromise to you: Quality guaranteed and expert technical support

---

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.co.jp/abpromise> or contact our technical team.

#### Terms and conditions

---

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors