


## Product datasheet

# Anti-Collagen IV antibody ab6586

★★★★★ [119 Abreviews](#) [820 References](#) [2 Images](#)

### Overview

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<b>Product name</b>	Anti-Collagen IV antibody
<b>Description</b>	Rabbit polyclonal to Collagen IV
<b>Host species</b>	Rabbit
<b>Specificity</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>Tested applications</b>	<b>Suitable for:</b> ELISA, IHC-Fr, WB, IHC-P, IP, ICC/IF, IHC-FrFI, IHC-FoFr
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Rat, Hamster, Cow, Dog, Human, Pig, Zebrafish, African green monkey, Chinese hamster, Syrian hamster <b>Predicted to work with:</b> Mammals 
<b>Immunogen</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>Positive control</b>	IHC-P: Human kidney and liver tissue.
<b>General notes</b>	<p>There are other recombinant monoclonal options, such as <a href="#">Recombinant Anti-Collagen IV antibody</a>.</p> <p>Abcam recommended secondaries - Goat Anti-Rabbit HRP (<a href="#">ab205718</a>) and Goat Anti-Rabbit Alexa Fluor<sup>®</sup> 488 (<a href="#">ab150077</a>).</p> <p>See other <a href="#">anti-rabbit secondary antibodies</a> that can be used with this antibody.</p> <p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&amp;As</p>

### Properties

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<b>Form</b>	Liquid
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<b>Storage instructions</b>	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.
<b>Storage buffer</b>	Preservative: 0.01% Sodium azide Constituents: 0.8766% Sodium chloride, 0.424% Potassium phosphate
<b>Purity</b>	Immunogen affinity purified
<b>Purification notes</b>	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.
<b>Primary antibody notes</b>	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.
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	IgG

## Applications

**The Abpromise guarantee** 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.

Application	Abreviews	Notes
ELISA		Use at an assay dependent concentration.
IHC-Fr	★★★★★ (21)	Use at an assay dependent concentration.
WB	★★★★★ (26)	Use at an assay dependent concentration. Predicted molecular weight: 161 kDa. This product is not recommended for use under denaturing conditions in WB, IP, and ELISA. We would suggest testing it under native conditions.
IHC-P	★★★★★ (35)	1/500. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.
IP	★★★★★ (3)	Use at an assay dependent concentration.
ICC/IF	★★★★★ (23)	Use at an assay dependent concentration. PubMed: 19933193
IF		Use at an assay dependent concentration.
IHC-FrFI	★★★★★ (1)	Use at an assay dependent concentration.
IHC-FoFr	★★★★★ (8)	Use at an assay dependent concentration.

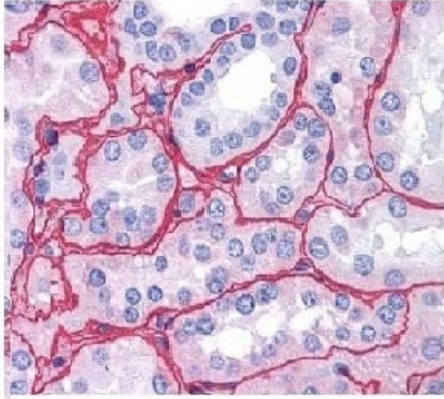
## Target

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<b>Function</b>	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.
<b>Tissue specificity</b>	Highly expressed in placenta.
<b>Involvement in disease</b>	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.
<b>Sequence similarities</b>	Belongs to the type IV collagen family. Contains 1 collagen IV NC1 (C-terminal non-collagenous) domain.
<b>Domain</b>	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.
<b>Post-translational modifications</b>	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.
<b>Cellular localization</b>	Secreted > extracellular space > extracellular matrix > basement membrane.

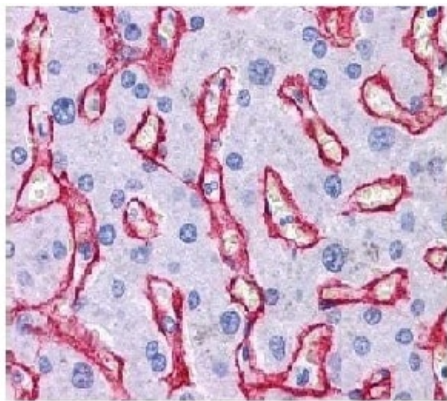
## Images

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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)

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

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