


Biotin Anti-Collagen IV antibody ab6581

★★★★★ [1 Abreviews](#) [7 References](#) [1 图像](#)

概述

产品名称	生物素Anti-Collagen IV抗体
描述	生物素兔多克隆抗体to Collagen IV
宿主	Rabbit
偶联物	Biotin
特异性	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.
经测试应用	适用于: ELISA, WB, IP, IHC-P
种属反应性	与反应: Cow, Human 预测可用于: Mammals 
免疫原	Full length native protein (purified) corresponding to Collagen IV. Collagen Type IV from human and bovine placenta.
常规说明	<p>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.</p> <p>These antibodies are 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.</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</p>

your needs before purchasing.

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&As

性能

形式 Liquid

存放说明 Shipped at 4°C. Store at +4°C short term (1-2 weeks). Store at -20°C or -80°C. Avoid freeze / thaw cycle.

存储溶液 Preservative: 0.01% Sodium azide
Constituents: 0.44% Sodium chloride, 1% BSA, 4.77% Sodium borate, 0.146% EDTA

纯度 Immunogen affinity purified

纯化说明 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.

Primary antibody说明 These antibodies are 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.

克隆 多克隆

同种型 IgG

应用

The Abpromise guarantee Abpromise™ 承诺保证使用ab6581于以下的经测试应用

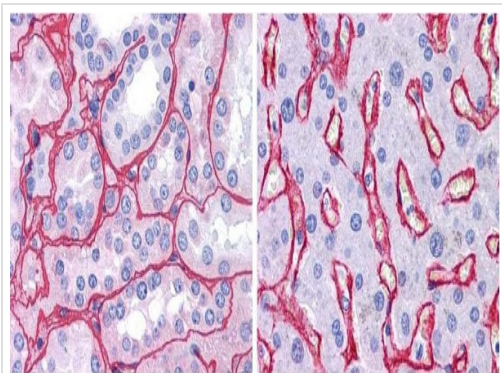
“应用说明”部分 下显示的仅为推荐的起始稀释度;实际最佳的稀释度/浓度应由使用者检定。

应用	Ab评论	说明
ELISA	★★★★☆ (1)	Use at an assay dependent concentration.
WB		Use at an assay dependent concentration. Predicted molecular weight: 161 kDa. Not recommended for use under denaturing conditions.
IP		Use at an assay dependent concentration.
IHC-P		1/1000 - 1/5000.

靶标

功能	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.
组织特异性	Highly expressed in placenta.
疾病相关	<p>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.</p> <p>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.</p> <p>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.</p>
序列相似性	<p>Belongs to the type IV collagen family.</p> <p>Contains 1 collagen IV NC1 (C-terminal non-collagenous) domain.</p>
结构域	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.
翻译后修饰	<p>Lysines at the third position of the tripeptide repeating unit (G-X-Y) are hydroxylated in all cases and bind carbohydrates.</p> <p>Prolines at the third position of the tripeptide repeating unit (G-X-Y) are hydroxylated in some or all of the chains.</p> <p>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.</p> <p>The trimeric structure of the NC1 domains is stabilized by covalent bonds between Lys and Met residues.</p> <p>Proteolytic processing produces the C-terminal NC1 peptide, arresten.</p>
细胞定位	Secreted > extracellular space > extracellular matrix > basement membrane.

图片



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Biotin Anti-Collagen IV antibody (ab6581)

Immunohistochemical analysis of formalin-fixed paraffin-embedded human tissue sections, labelling Collagen IV with ab6581 at a concentration of 10 µg/mL for 1 hour at room temperature. The left panel is human kidney sections with the right panel being human liver sections. Antigen retrieval was performed with 0.01 M sodium citrate buffer at pH 6.0 at 99°C for 20 mins. The secondary used was a rabbit peroxidase secondary antibody at a 1/10,000 dilution incubated for 45 mins at room temperature. Counterstaining against nuclear DNA was hematoxylin.

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