

Collagen IV Rabbit pAb

Collagen IV Rabbit pAb Catalog # AP94831

## Specification

# Collagen IV Rabbit pAb - Product Information

Application Primary Accession Reactivity Host Clonality Calculated MW Physical State Immunogen Epitope Specificity Isotype <b>Purity</b> affinity purified by Protein A	WB, IHC-P, IHC-F, IF, E <u>P02463</u> Rat, Human Rabbit Polyclonal 165 KDa Liquid KLH conjugated synthetic peptide derived from human Collagen alpha-1(IV) chain 1571-1669/1669 IgG
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02%
SUBCELLULAR LOCATION	Secreted, extracellular space, extracellular
SIMILARITY	Contains 1 FAD-binding FR-type domain.Contains 1 ferric oxidoreductase domain
SUBUNIT	There are six type IV collagen isoforms, alpha 1(IV)-alpha 6(IV), each of which can form a triple helix structure with 2 other chains to generate type IV collagen network
Post-translational modifications	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
DISEASE	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 familial porencephaly (POREN1) [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. This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

Important Note

#### **Background Descriptions**

This gene encodes the major type IV alpha collagen chain of basement membranes. Like the other members of the type IV collagen gene family, this gene is organized in a head-to-head conformation with another type IV collagen gene so that each gene pair shares a common promoter. [provided by RefSeq, Jul 2008]

## **Collagen IV Rabbit pAb - Additional Information**

Gene ID 12826

Other Names Collagen alpha-1(IV) chain, Arresten, Col4a1 {ECO:0000312|MGI:MGI:88454}

Target/Specificity Highly expressed in placenta.

#### Dilution

<span class ="dilution\_WB">WB~~1:1000</span><br \><span class ="dilution\_IHC-P">IHC-P~~N/A</span><br \><span class ="dilution\_IHC-F">IHC-F~~N/A</span><br \><span class ="dilution\_IF">IF~~1:50~200</span><br \><span class ="dilution\_E">E~~N/A</span>

#### Format

0.01M TBS(pH7.4), 0.09% (W/V) sodium azide and 50% Glyce

#### Storage

Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH



7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

## Collagen IV Rabbit pAb - Protein Information

Name Col4a1 {ECO:0000312|MGI:MGI:88454}

Function

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.

**Cellular Location** Secreted, extracellular space, extracellular matrix, basement membrane

**Tissue Location** Detected in the basement membrane of the cornea (at protein level).

#### Collagen IV Rabbit pAb - Protocols

Provided below are standard protocols that you may find useful for product applications.

- <u>Western Blot</u>
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- <u>Flow Cytomety</u>
- <u>Cell Culture</u>

## Collagen IV Rabbit pAb - Images



Blank control: Hepg2 Cells(blue). Primary Antibody: Rabbit Anti-Collagen IV/AF647 Conjugated antibody (AP94831), Dilution: 1  $\mu$ g in 100  $\mu$ L 1X PBS containing 0.5% BSA; Isotype Control Antibody: Rabbit IgG/AF647(orange) ,used under the same conditions.



# Collagen IV Rabbit pAb - Background

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