Collagen IV (PT0131R) PT® Rabbit mAb

CatalogNo: YM8073 Recombinant

Key Features

Host Species
- Rabbit

Reactivity
- Human,

Applications
- WB,IHC,IF,IP,ELISA

MW
- 160kD (Calculated)
200kD (Observed)

Isotype
- IgG,Kappa

Recommended Dilution Ratios

IHC 1:200-1000
WB 1:1000-5000
IF 1:200-1000
ELISA 1:5000-20000
IP 1:50-200

Storage

Storage*	-15°C to -25°C/1 year(Do not lower than -25°C)
Formulation	PBS, 50% glycerol, 0.05% Proclin 300, 0.05%BSA

Basic Information

Clonality	Monoclonal
Clone Number	PT0131R

Immunogen Information

Specificity	Endogenous

Target Information

Gene name COL4A1

Protein Name Collagen Type IV

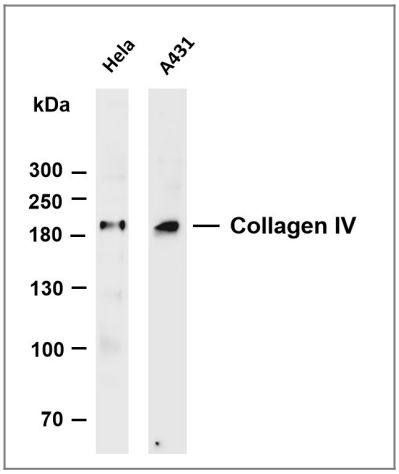
Organism	Gene ID	UniProt ID
Human	1282;	P02462;

Cellular Localization Cytoplasmic

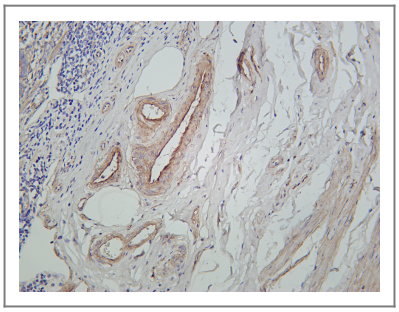
Tissue specificity Highly expressed in placenta.

Function Disease:Defects in COL4A1 are a cause of brain small vessel disease with hemorrhage [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.,Disease:Defects in COL4A1 are a cause of porencephaly type 1 [MIM:175780]; also known as encephaloclastic porencephaly. 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. Inheritance is autosomal dominant.,Disease: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.,Domain: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.,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. Potently inhibits endothelial cell proliferation and angiogenesis. Inhibits angiogenesis potentially via mechanisms involving cell surface proteoglycans and the alpha and beta integrins of endothelial cells.,PTM:Lysines at the third position of the tripeptide repeating unit (G-X-Y) are hydroxylated in all cases and bind carbohydrates.,PTM:Prolines at the third position of the tripeptide repeating unit (G-X-Y) are hydroxylated in some or all of the chains.,PTM:The trimeric structure of the NC1 domains may be stabilized by covalent bonds between Lys and Met residues.,PTM: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.,similarity:Belongs to the type IV collagen family.,similarity:Contains 1 collagen IV NC1 (C-terminal non-collagenous) 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.,tissue specificity:Highly expressed in placenta.,

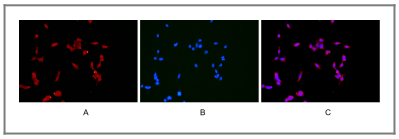
Validation Data



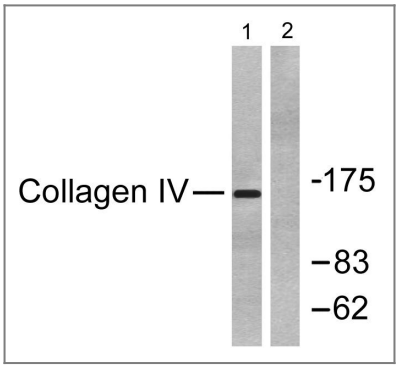
Various whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-Collagen IV antibody. The HRP-conjugated Goat anti-Rabbit IgG(H + L) antibody was used to detect the antibody. Lane 1: Hela Lane 2: A431 Predicted band size: 160kDa Observed band size: 200kDa



Human appendix was stained with Anti-Collagen IV rabbit antibody



Immunofluorescence analysis of HEK293. Picture A: Collagen IV antibody (red). Picture B: DAPI (blue). Picture C: Merge of A+B



Western blot analysis of lysates from HeLa cells, using Collagen IV Antibody. The lane on the right is blocked with the synthesized peptide.

Contact information

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Please scan the QR code to access additional product information: **Collagen IV (PT0131R) PT® Rabbit mAb**