

For Research Use Only

# COL4A1 Recombinant monoclonal antibody

Catalog Number: 85256-4-RR



## Basic Information

|  |   |   |
|--|---|---|
| <b>Catalog Number:</b><br>85256-4-RR                           | <b>GenBank Accession Number:</b><br>BC151220    | <b>Purification Method:</b><br>Protein A purification                   |
| <b>Size:</b><br>100ul , Concentration: 1000 µg/ml by Nanodrop; | <b>GeneID (NCBI):</b><br>1282                   | <b>CloneNo.:</b><br>251500E12   |
| <b>Source:</b><br>Rabbit                                       | <b>UNIPROT ID:</b><br>P02462                    | <b>Recommended Dilutions:</b><br>WB: 1:1000-1:4000<br>IHC: 1:750-1:3000 |
| <b>Isotype:</b><br>IgG   | <b>Full Name:</b><br>collagen, type IV, alpha 1 |   |
| <b>Immunogen Catalog Number:</b><br>AG34391                    | <b>Calculated MW:</b><br>1669 aa, 161 kDa       |   |
|  | <b>Observed MW:</b><br>220 kDa                  |   |

## Applications

**Tested Applications:**  
WB, IHC, ELISA

**Species Specificity:**  
human

**Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (\*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0**

**Positive Controls:**

WB : HeLa cells,

IHC : human placenta tissue, human colon tissue, human kidney tissue

## Background Information

COL4A1 (Collagen Type IV Alpha 1 Chain) encodes a major component of type IV collagen, which is an essential structural element of basement membranes in various tissues. COL4A1 forms heterotrimers with other collagen type IV chains (e.g., COL4A2) and interacts with extracellular matrix components such as laminins, proteoglycans, and perlecan. Proteolytic cleavage of the non-collagenous domain of COL4A1 produces a fragment called arresten, which has anti-angiogenic and tumor suppressor properties. Elevated expression of COL4A1 has been observed in various cancers, including hepatocellular carcinoma (HCC), where it promotes tumor growth and metastasis through the FAK-Src signaling pathway. COL4A1 is highly expressed in various tissues, including the placenta, fat, and other organs. The expression of COL4A1 can be regulated by transcription factors such as RUNX1, which has been shown to upregulate COL4A1 in hepatocellular carcinoma.

## Storage

**Storage:**

Store at -20°C. Stable for one year after shipment.

**Storage Buffer:**

PBS with 0.02% sodium azide and 50% glycerol, pH7.3

Aliquoting is unnecessary for -20°C storage

\*\*\* 20ul sizes contain 0.1% BSA

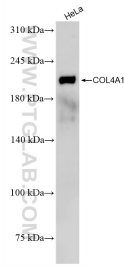
For technical support and original validation data for this product please contact:

T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)

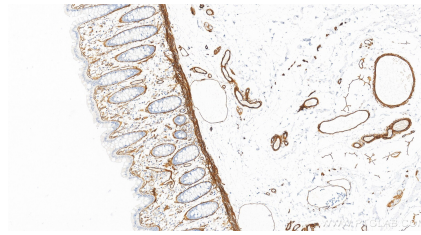
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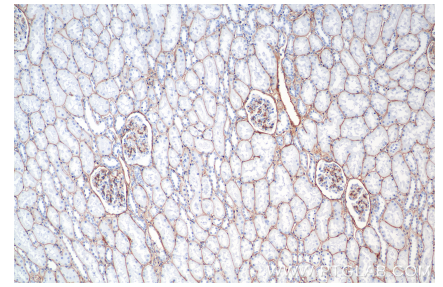
## Selected Validation Data



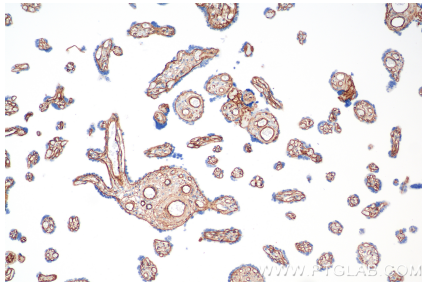
HeLa cells were subjected to SDS PAGE followed by western blot with 85256-4-RR (COL4A1 antibody) at dilution of 1:2000 incubated at room temperature for 1.5 hours.



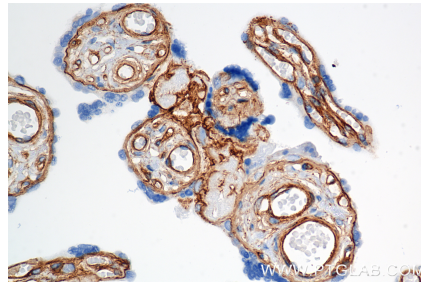
Immunohistochemical analysis of paraffin-embedded human colon tissue slide using 85256-4-RR (COL4A1 antibody) at dilution of 1:1500 (under 20x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



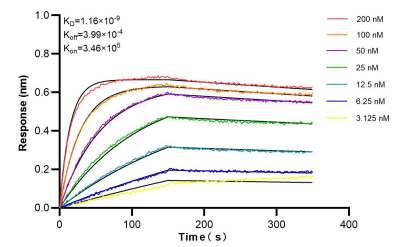
Immunohistochemical analysis of paraffin-embedded human kidney tissue slide using 85256-4-RR (COL4A1 antibody) at dilution of 1:1500 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunohistochemical analysis of paraffin-embedded human placenta tissue slide using 85256-4-RR (COL4A1 antibody) at dilution of 1:1500 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunohistochemical analysis of paraffin-embedded human placenta tissue slide using 85256-4-RR (COL4A1 antibody) at dilution of 1:1500 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Bilayer interferometry (BLI) kinetic assays of 85256-4-RR against Human COL4A1 were performed. The affinity constant is 1.16 nM.