

## AF5910

## Monoclonal Antibody to Collagen type IV - Purified

**Alternate names:**

COL4A1

**Quantity:**

0.1 mg

**Concentration:**

0.5 mg/ml

**Background:**

Collagen IV is a major constituent of the basement membranes along with laminins, proteoglycans and enactins. It is a multimeric protein composed of 3 alpha subunits. These subunits are encoded by 6 different genes, alpha 1 through alpha 6, each of which can form a triple helix structure with 2 other subunits to form type IV collagen. It can form insoluble fibers with high tensile strength. Collagen IV is useful in detecting the loss of parts of basement membranes in carcinomas.

**Uniprot ID:**

[P02462](#)

**NCBI:**

[9606](#)

**GeneID:**

[1282](#)

**Host / Isotype:**

Mouse / IgG1

**Recommended Isotype Controls:**

SM10P (for use in human samples), AM03095PU-N

**Clone:**

IV-4H12

**Format:**

**State:** Liquid purified Ig fraction  
**Buffer System:** 0.1 M Sodium Phosphate buffer, pH 7.0  
**Stabilizers:** 0.5% BSA (protease-free)

**Applications:**

**ELISA:** Reported in Ref.4  
**Western blot:** 10 µg/ml (See also Ref.3)  
**Immunohistochemistry on Frozen Sections:** 1-10 µg/ml.  
**Immunohistochemistry on Paraffin Sections:** 1-10 µg/ml.  
Heat induced antigen retrieval with citrat buffer, pH 6.2 using a pressure cooker was preformed. Sections were blocking using a commercially available casein solution. Signal was generated using a commercially available polymer HRP detection system and DAB.  
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

**Specificity:**

The antibody specifically reacts with the 7S domain of Human Collagen Type IV.

**Species Reactivity:**

**Tested:** Human.

**Storage:**

Upon receipt, store undiluted (in aliquots) at -20°C.  
Avoid repeated freezing and thawing.  
Shelf life: one year from despatch.

**Product Citations:**

**Purchased from Acris:**  
1. Behrens DT, Villone D, Koch M, Brunner G, Sorokin L, Robenek H, et al. The epidermal basement membrane is a composite of separate laminin- or collagen IV-containing networks connected by aggregated perlecan, but not by nidogens. J Biol

Chem. 2012 May 25;287(22):18700-9. doi: 10.1074/jbc.M111.336073. Epub 2012 Apr 9. PubMed PMID: 22493504.

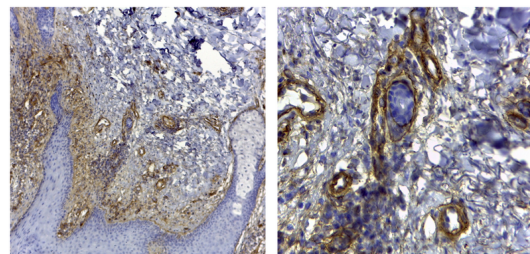
2. Flenkenthaler F, Windschüttl S, Fröhlich T, Schwarzer JU, Mayerhofer A, Arnold GJ. Secretome analysis of testicular peritubular cells: a window into the human testicular microenvironment and the spermatogonial stem cell niche in man. J Proteome Res. 2014 Mar 7;13(3):1259-69. doi: 10.1021/pr400769z. Epub 2014 Jan 30. PubMed PMID: 24422521.

**General Readings:**

1. Mayne R, Zettergren JG, Mayne PM, Bedwell NW. Isolation and partial characterization of basement membrane-like collagens from bovine thoracic aorta. Artery. 1980;7(4):262-80. PubMed PMID: 7213017.
2. Matsumoto, E. et al. Foreknowledge of liver fibrosis: development of immunoassay system for serum collagen peptides with monoclonal antibody. J. Wakayaka Med. Soc., 39. 87-106, 1988 (In Japanese).
3. Matsumoto, E. et al. Acta pathol. Jpn., 39, 217-223, 1989.
4. Obata, K. et al., One step sandwich enzyme immunoassay for human type IVcollagen using monoclonal antibodies. Clin. Clim. Acta, 181, 293-304, 1989.

**Pictures:**

Staining of FFPE Human skin (20x and 40x) with Collagen type IV Antibody Cat.-No AF5910 (Clone IV-4H12) at 2 µg/ml. Antibody positive in fibillar collagen and in epithelial cells of basement membrane.



Staining of FFPE Human epithelial basocellular tumor (20x and 40x) with Collagen type IV Antibody Cat.-No AF5910 (Clone IV-4H12) at 2 µg/ml. Antibody positive in interstitial collagene and in epithelial neoplastic cells of basement membrane.

