

A25916

Leader in Biomolecular Solutions for Life Science



Collagen IV Rabbit mAb

Catalog No.: A25916

Recombinant

1 Publications

Basic Information

Observed MW

180kDa

Calculated MW

162kDa/161kDa/168kDa

Category

SMab Recombinant Monoclonal Antibody

Applications

WB,IF/ICC,ELISA

Cross-Reactivity

Human,Mouse,Rat

CloneNo number

ARC65626

Recommended Dilutions

WB 1:500 - 1:1000

IF/ICC 1:50 - 1:200

Contact



www.abclonal.com

Background

Type IV collagen, the major structural component of basement membranes, 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. This gene encodes alpha 3. In the Goodpasture syndrome, autoantibodies bind to the collagen molecules in the basement membranes of alveoli and glomeruli. The epitopes that elicit these autoantibodies are localized largely to the non-collagenous C-terminal domain of the protein. A specific kinase phosphorylates amino acids in this same C-terminal region and the expression of this kinase is upregulated during pathogenesis. This gene is also linked to an autosomal recessive form of Alport syndrome. The mutations contributing to this syndrome are also located within the exons that encode this C-terminal region. 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. This gene encodes a type IV collagen alpha protein. Type IV collagen proteins are integral components of basement membranes. This gene shares a bidirectional promoter with a paralogous gene on the opposite strand. The protein consists of an amino-terminal 7S domain, a triple-helix forming collagenous domain, and a carboxy-terminal non-collagenous domain. It functions as part of a heterotrimer and interacts with other extracellular matrix components such as perlecan, proteoglycans, and laminins. In addition, proteolytic cleavage of the non-collagenous carboxy-terminal domain results in a biologically active fragment known as arresten, which has anti-angiogenic and tumor suppressor properties. Mutations in this gene cause porencephaly, cerebrovascular disease, and renal and muscular defects. Alternative splicing results in multiple transcript variants.

Immunogen Information

Gene ID

1285/1282/1284/1286

Swiss Prot

Q01955/P29400/P08572/P02462

Immunogen

Recombinant fusion protein containing a sequence corresponding to amino acids 1555-1669 of human Collagen IV (NP_000082.2).

Synonyms

ATS2; ATS3; BFH2; ATS3A; ATS3B; BSVD; BSVD1; RATOR; PADMAL; COL4A1s

Product Information

Source

Rabbit

Isotype

IgG

Purification

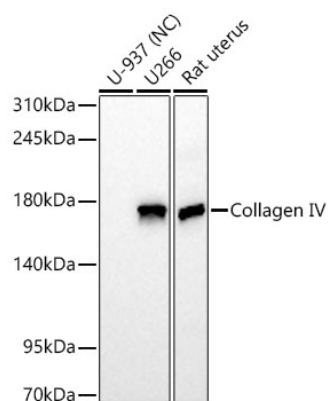
Affinity purification

Storage

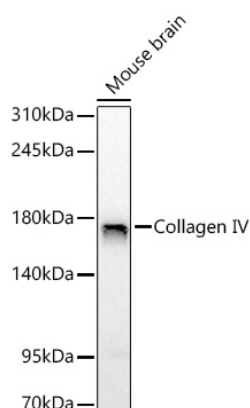
Store at -20°C. Avoid freeze / thaw cycles.

Buffer: PBS with 0.05% proclin300,0.05% BSA,50% glycerol,pH7.3.

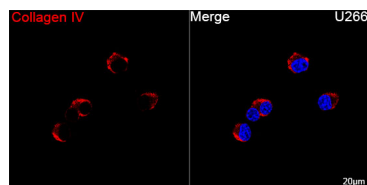
Validation Data



Western blot analysis of various lysates using Collagen IV Rabbit mAb (A25916) at 1:1000 dilution incubated overnight at 4°C.
 Secondary antibody: HRP-conjugated Goat anti-Rabbit IgG (H+L) (AS014) at 1:10000 dilution.
 Lysates/proteins: 25 µg per lane.
 Blocking buffer: 3% nonfat dry milk in TBST.
 Detection: ECL Basic Kit (RM00020).
 Negative control (NC): U-937
 Exposure time: 30s.



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Confocal imaging of U266 cells using Collagen IV Rabbit mAb (A25916, dilution 1:200) followed by a further incubation with Cy3 Goat Anti-Rabbit IgG (H+L) (AS007, dilution 1:500) (Red). DAPI was used for nuclear staining (Blue). Objective: 100x.