

## Mouse anti-Human Collagen IV Monoclonal Antibody | anti-COL4A1 antibody

Anti-Collagen IV Antibody (monoclonal, 3G3)

|                               |                      |                            |                                                           |
|-------------------------------|----------------------|----------------------------|-----------------------------------------------------------|
| CATALOG #<br><b>AAA125140</b> | HOST<br><b>Mouse</b> | REACTIVITY<br><b>Human</b> | APPLICATIONS<br><b>Immunohistochemistry, Western Blot</b> |
|-------------------------------|----------------------|----------------------------|-----------------------------------------------------------|

### PRODUCT SYNONYMS

Collagen IV; Monoclonal Antibody; Anti-Collagen IV Antibody (monoclonal; 3G3); Collagen alpha-1 (IV) chain; Arresten; COL4A1; Collagen; type IV; alpha 1; anti-COL4A1 antibody

### PRODUCT SPECIFICATIONS

|                                                  |                                                                                                                                                                                                               |
|--------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Host                                             | Mouse                                                                                                                                                                                                         |
| Reactivity                                       | Human                                                                                                                                                                                                         |
| Clonality                                        | Monoclonal                                                                                                                                                                                                    |
| Isotype                                          | IgG1                                                                                                                                                                                                          |
| Clone Number                                     | 3G3                                                                                                                                                                                                           |
| Specificity                                      | No cross reactivity with other proteins.                                                                                                                                                                      |
| Purity/Purification                              | Immunogen Affinity Purified                                                                                                                                                                                   |
| Form/Format                                      | Lyophilized                                                                                                                                                                                                   |
| Sequence Length                                  | 519                                                                                                                                                                                                           |
| Applicable Applications for anti-COL4A1 antibody | IHC (Immunohistochemistry), WB (Western Blot)                                                                                                                                                                 |
| Immunogen                                        | E Coli-derived human Collagen IV recombinant protein (Position: G1445-T1669). Human Collagen IV shares 97% amino acid (aa) sequence identity with mouse Collagen IV.                                          |
| Reconstitution                                   | Add 0.2ml of distilled water will yield a concentration of 500ug/ml.                                                                                                                                          |
| Relevant Detection Systems                       | It is recommended to use an Enhanced Chemiluminescent Kit with anti-Rabbit IgG for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit for IHC-P.                                         |
| Preparation and Storage                          | Store at -20 degree C for one year. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for a longer time.<br>Avoid repeated freezing and thawing. |

IMAGES



WB (Western Blot)

Figure 3. Western blot analysis of Collagen IV using anti-Collagen IV antibody (M01411).Electrophoresis was performed on a 8% SDS-PAGE gel at 70V (Stacking gel)/90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.Lane 1: human HEK293T whole cell lysate,Lane 2: human Hela whole cell lysate,Lane 3: human A549 whole cell lysate.After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/TBS for 1.5 hour at RT. The membrane was incubated with mouse anti-Collagen IV antigen affinity purified monoclonal antibody at 0.5 ug/ml overnight at 4 degree C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-mouse IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for Collagen IV at approximately 220KD. The expected band size for Collagen IV is at 161KD.



IHC (Immunohistochemistry)

Figure 1. IHC analysis of Collagen IV using anti-Collagen IV antibody (M01411).Collagen IV was detected in paraffin-embedded section of human lung cancer tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml mouse anti-Collagen IV Antibody (M01411) overnight at 4 degree C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.



WB (Western Blot)

Figure 3. Western blot analysis of Collagen IV using anti-Collagen IV antibody (M01411).Electrophoresis was performed on a 8% SDS-PAGE gel at 70V (Stacking gel)/90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.Lane 1: human HEK293T whole cell lysate,Lane 2: human Hela whole cell lysate,Lane 3: human A549 whole cell lysate.After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/TBS for 1.5 hour at RT. The membrane was incubated with mouse anti-Collagen IV antigen affinity purified monoclonal antibody at 0.5 ug/ml overnight at 4 degree C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-mouse IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for Collagen IV at approximately 220KD. The expected band size for Collagen IV is at 161KD.

ADDITIONAL INFORMATION

|                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Product Information for anti-COL4A1 antibody | Description: Mouse IgG monoclonal antibody for Collagen IV detection. Tested with WB, IHC-P in Human. Background: COL4A1, also known as ICH or Collagen alpha-1 (IV), is a protein that in humans is encoded by the COL4A1 gene. It is mapped to 13q34. 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. COL4A1 binds to alpha-1/beta-1 integrin and inhibits migration, proliferation, and tube formation by endothelial cells. It is also a potential therapeutic candidate for targeting tumor angiogenesis. |
| References                                           | 1. Soininen R, Haka-Risku T, Prockop DJ, Tryggvason K (Jan 1988). "Complete primary structure of the alpha 1-chain of human basement membrane (type IV) collagen". FEBS Lett 225 (1-2): 188-94. 2. Plaisier E, Gribouval O, Alamowitch S et al. (2007). "COL4A1 mutations and hereditary angiopathy, nephropathy, aneurysms, and muscle cramps". N. Engl. J. Med. 357 (26): 2687-2695. 3. Wang, X., Harris, R. E., Bayston, L. J., Ashe, H. L. Type IV collagens regulate BMP signalling in Drosophila. Nature 455: 72-77, 2008.                                                                                                                                                                                                                     |

NCBI AND UNIPROT INFORMATION

|                           |                                                                        |
|---------------------------|------------------------------------------------------------------------|
| NCBI GI #                 | 734520332                                                              |
| NCBI GeneID               | 1282                                                                   |
| NCBI Accession #          | NP_001290039.1                                                         |
| NCBI GenBank Nucleotide # | NM_001303110.1                                                         |
| UniProt Accession #       | P02462; Q1P9S9; Q5VWF6; Q86X41; Q8NF88; Q9NYC5; A7E2W4; B1AM70; F5H5K0 |
| Molecular Weight          | 50,155 Da                                                              |
| NCBI Official Full Name   | collagen alpha-1(IV) chain isoform 2                                   |

|                                  |                                |
|----------------------------------|--------------------------------|
| NCBI Official Synonym Full Names | collagen type IV alpha 1 chain |
| NCBI Official Symbol             | COL4A1                         |
| NCBI Official Synonym Symbols    | BSVD; RATOR                    |
| NCBI Protein Information         | collagen alpha-1(IV) chain     |
| UniProt Protein Name             | Collagen alpha-1(IV) chain     |
| UniProt Gene Name                | <b>COL4A1</b>                  |

**For Research Use Only.** Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/monoclonal/collagen-iv-antibody-clone-3g3-immunohistochemistry-western-blot-elisa/125140>