Human Collagen IV α1 Antibody

Monoclonal Mouse IgG Clone # 1106301
Catalog Number: MAB11758

DESCRIPTION

Species Reactivity	Human
Specificity	Detects recombinant human COL4A1 protein in Direct ELISA.
Source	Monoclonal Mouse IgG Clone # 1106301
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Synthetic peptide Accession # P02462
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose.

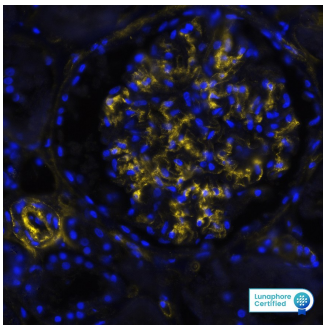
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Multiplex Immunofluorescence	15 µg/mL	Immersion fixed paraffin-embedded sections of human kidney, liver and liver carcinoma
Immunohistochemistry	3-25 µg/mL	Immersion fixed paraffin-embedded sections of human kidney, human liver cancer and human liver

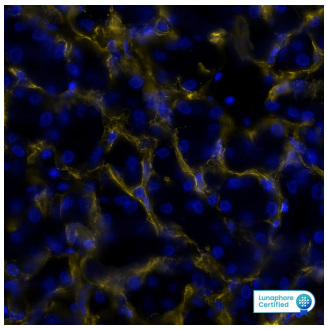
DATA

Multiplex Immunofluorescence



COL4A1 in Human Kidney via seqIF™ staining on COMET™
COL4A1 was detected in immersion fixed paraffin-embedded sections of human Kidney using Mouse Anti-Human COL4A1, Monoclonal Antibody (Catalog#MAB11758) at 15ug/mL at 37 ° Celsius for 8 minutes. Before incubation with the primary antibody, tissue underwent an all-in-one dewaxing and antigen retrieval preprocessing using PreTreatment Module (PT Module)and Dewax and HIER Buffer H (pH 9; Epredia Catalog #TA-999-DHBH).Tissue was stained using the Alexa Fluor™ 647 Goat anti-Mouse IgG Secondary Antibody at 1:200 at 37 ° Celsius for 2 minutes. (Yellow; Lunaphore Catalog # DR647MS) and counterstained with DAPI (blue; Lunaphore Catalog # DR100). Specific staining was localized to the extracellular space. Protocol available in COMET™ Panel Builder.

Multiplex Immunofluorescence



COL4A1 in Human Liver via seqIF™ staining on COMET™
COL4A1 was detected in immersion fixed paraffin-embedded sections of human Liver using Mouse Anti-Human COL4A1, Monoclonal Antibody (Catalog#MAB11758) at 15ug/mL at 37 ° Celsius for 8 minutes. Before incubation with the primary antibody, tissue underwent an all-in-one dewaxing and antigen retrieval preprocessing using PreTreatment Module (PT Module)and Dewax and HIER Buffer H (pH 9; Epredia Catalog #TA-999-DHBH).Tissue was stained using the Alexa Fluor™ 647 Goat anti-Mouse IgG Secondary Antibody at 1:200 at 37 ° Celsius for 2 minutes. (Yellow; Lunaphore Catalog # DR647MS) and counterstained with DAPI (blue; Lunaphore Catalog # DR100). Specific staining was localized to the extracellular space. Protocol available in COMET™ Panel Builder.

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Global | bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL: 1.612.379.2956
USA | TEL: 800.343.7475 Canada | TEL: 855.668.8722 Europe | Middle East | Africa TEL: +44.0.1235.529449
China | info.cn@bio-techne.com TEL: 400.821.3475

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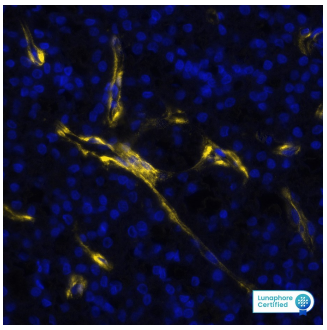
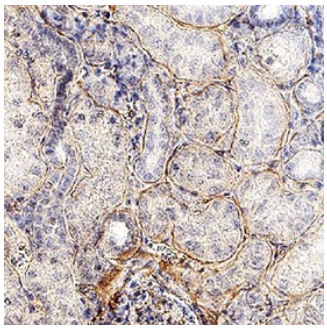
Multiplex Immunofluorescence



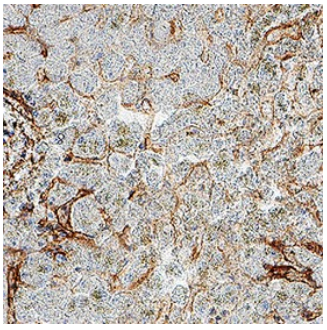
COL4A1 in Human Liver Carcinoma via seqIF™ staining on COMET™ COL4A1 was detected in immersion fixed paraffin-embedded sections of human liver carcinoma using Mouse Anti-Human COL4A1, Monoclonal Antibody (Catalog#MAB11758) at 15ug/mL at 37 ° Celsius for 8 minutes. Before incubation with the primary antibody, tissue underwent an all-in-one dewaxing and antigen retrieval preprocessing using PreTreatment Module (PT Module)and Dewax and HIER Buffer H (pH 9; Epredia Catalog #TA-999-DHBH).Tissue was stained using the Alexa Fluor™ 647 Goat anti-Mouse IgG Secondary Antibody at 1:200 at 37 ° Celsius for 2 minutes. (Yellow; Lunaphore Catalog # DR647MS) and counterstained with DAPI (blue; Lunaphore Catalog # DR100). Specific staining was localized to the extracellular space. Protocol available in COMET™ Panel Builder.

Immunohistochemistry



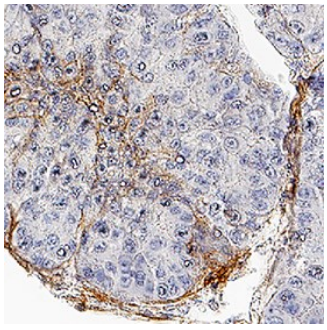
Detection of Collagen IV α1 in Human Kidney. Collagen IV α1 was detected in immersion fixed paraffin-embedded sections of human kidney using Mouse Anti-Human Collagen IV α1 Monoclonal Antibody (Catalog # MAB11758) at 5 µg/ml overnight at 4 °C. Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using VisUCyte Antigen Retrieval Reagent-Basic (Catalog # VCTS021). Tissue was stained using the HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007) and counterstained with hematoxylin (blue). Specific staining was localized to the basement membrane. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

Immunohistochemistry



Detection of Collagen IV α1 in Human Liver. Collagen IV α1 was detected in immersion fixed paraffin-embedded sections of human liver using Mouse Anti-Human Collagen IV α1 Monoclonal Antibody (Catalog # MAB11758) at 5 µg/ml overnight at 4 °C. Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using VisUCyte Antigen Retrieval Reagent-Basic (Catalog # VCTS021). Tissue was stained using the HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007) and counterstained with hematoxylin (blue). Specific staining was localized to the basement membrane. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

Immunohistochemistry



Detection of Collagen IV α1 in Human Liver Cancer. Collagen IV α1 was detected in immersion fixed paraffin-embedded sections of human liver cancer using Mouse Anti-Human Collagen IV α1 Monoclonal Antibody (Catalog # MAB11758) at 5 µg/ml overnight at 4 °C. Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using VisUCyte Antigen Retrieval Reagent-Basic (Catalog # VCTS021). Tissue was stained using the HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007) and counterstained with hematoxylin (blue). Specific staining was localized to the basement membrane. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

PREPARATION AND STORAGE

Reconstitution	Reconstitute lyophilized material at 0.2 mg/ml in sterile PBS. For liquid material, refer to CoA for concentration.
Shipping	Lyophilized product is shipped at ambient temperature. Liquid small pack size (-SP) is shipped with polar packs. Upon receipt, store immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

COL4A1 (collagen IV α1) is a 185 kDa member of the type IV collagen family. It is a secreted glycoprotein that is expressed by multiple cell types, including fibroblasts, keratinocytes and endothelial cells. Two COL4A1 molecules interact with a 170 kDa α2 chain to form a collagen IV triple helix. This helix further interacts with other helices to generate covalent oligomers that form a scaffold in the basement membrane. Mature human COL4A1 is 1642 amino acids (aa) in length. It has an N-terminal “7S” proregion (aa 28-172), a central collagenous domain that contains multiple Gly-based repeats (aa 173-1440), and a C-terminal domain that is proteolytically cleaved to generate a 25-28 kDa NC1 globular segment that has potent antiangiogenic activity (aa 1441-1669). Multiple splice forms exist. One shows a deletion of aa 499-849, a second shows a seven aa substitution for aa 513-1669, and a third shows a seven aa substitution for aa 958-1669. Over aa 1441-1669, human COL4A1 is 97% aa identical to mouse COL4A1.

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