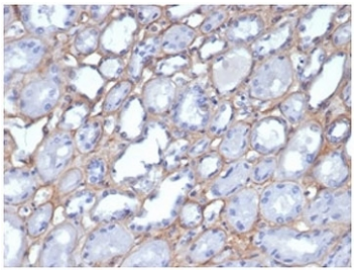
Collagen IV Antibody / COL4A1/2 [clone M3F7] (V9184)

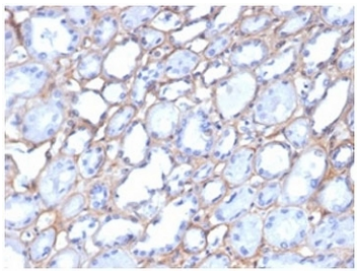
Catalog No.	Formulation	Size
V9184-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V9184-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V9184SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

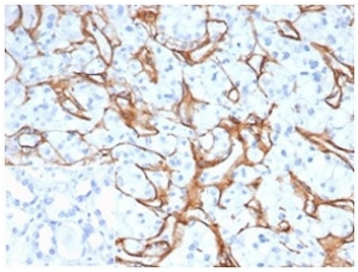
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	M3F7
Purity	Protein A/G affinity
UniProt	P02462& P08572
Localization	Secreted
Applications	Immunofluorescence : 1-2ug/ml Western Blot : 1-2ug/ml Immunohistochemistry (FFPE) : 1-2ug/ml
Limitations	This Collagen IV antibody is available for research use only.



Immunohistochemistry of Collagen IV antibody in human kidney tissue. Formalin-fixed, paraffin-embedded human kidney was stained using Collagen IV antibody clone M3F7. Heat induced epitope retrieval was performed by boiling tissue sections in 10mM Tris with 1mM EDTA, pH 9, for 20 min followed by cooling prior to staining. HRP-DAB brown chromogenic signal outlines glomerular and tubular basement membranes, demonstrating the characteristic linear extracellular staining pattern of Collagen type IV within renal tissue.



IHC staining of FFPE human kidney tissue with Collagen IV antibody clone M3F7. HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.



IHC staining of FFPE human kidney adenocarcinoma tissue with Collagen IV antibody clone M3F7 at 2ug/ml in PBS for 30min RT. Strong staining of glomeruli is observed. Negative control inset: PBS instead of primary antibody to control for secondary binding. HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.

Description

Collagen IV Antibody detects Collagen type IV, a major structural component of basement membranes and a critical element of the extracellular matrix. Clone M3F7 is a mouse monoclonal antibody widely referenced in peer-reviewed publications and is used in research applications to evaluate basement membrane integrity, vascular architecture, and epithelial-stromal interfaces in tissue specimens.

Collagen IV antibody, also referred to as Type IV collagen antibody and COL4A antibody in the literature, targets network-forming collagen chains encoded by genes including COL4A1, COL4A2, COL4A3, COL4A4, COL4A5, and COL4A6. Unlike fibrillar collagens, Collagen IV assembles into a sheet-like scaffold that forms the structural backbone of basement membranes. These networks interact with laminins, nidogens, and heparan sulfate proteoglycans to regulate cell adhesion, migration, differentiation, and barrier function across diverse tissues.

Collagen IV is widely distributed in vascular basement membranes, kidney glomeruli, lung alveolar septa, skeletal muscle endomysium, and epithelial basement membrane zones. In tissue-based analyses, Collagen IV typically demonstrates continuous linear staining outlining blood vessels, glands, and epithelial layers. This pattern makes a Collagen IV Antibody useful for investigations of angiogenesis, tumor invasion, extracellular matrix remodeling, and developmental tissue organization.

Basement membrane disruption is a key feature of tumor progression and inflammatory tissue injury, where degradation of Collagen IV facilitates cellular invasion and structural disorganization. A Collagen IV Antibody such as clone M3F7 can therefore support research focused on extracellular matrix biology, epithelial-mesenchymal transition, and microenvironmental alterations in disease models. This antibody targets Collagen IV in research applications and is available from NSJ Bioreagents.

Application Notes

Optimal dilution of the Collagen IV antibody clone M3F7 should be determined by the researcher.

Immunogen

An amino acid sequence from the alpha1 (IV)-alpha2(IV) triple helix was used as the immunogen for the Collagen IV antibody clone M3F7. This antibody does not recognize denatured type IV collagen.

Storage

Aliquot the Collagen IV antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.