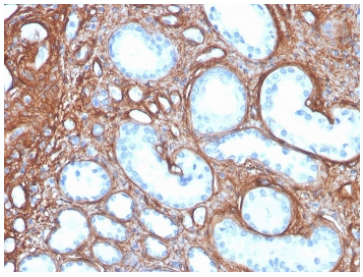
COL4A Antibody Recombinant Mouse MAb / Collagen IV [clone rCOL4/4742] (V8646)

Catalog No.	Formulation	Size
V8646-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V8646-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V8646SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

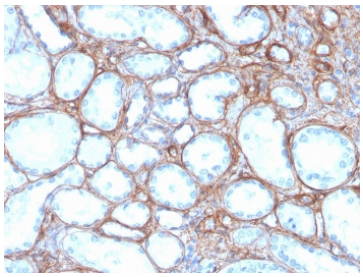
Recombinant MOUSE MONOCLONAL

Bulk quote request

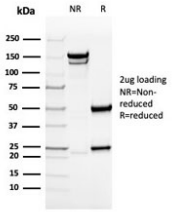
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Recombinant Mouse Monoclonal
Isotype	Mouse IgG2a, kappa
Clone Name	rCOL4/4742
Purity	Protein G affinity chromatography
UniProt	P02462
Applications	Immunohistochemistry (FFPE): 1-2ug/ml for 30 minutes at RT
Limitations	This COL4A antibody is available for research use only.



Immunohistochemistry of COL4A antibody in human kidney tissue. Formalin-fixed, paraffin-embedded human kidney was stained using recombinant mouse monoclonal COL4A antibody (clone rCOL4/4742). 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. Strong HRP-DAB brown chromogenic signal outlines glomerular capillary loops and tubular basement membranes, demonstrating the characteristic linear extracellular staining pattern of Collagen type IV within renal tissue.



IHC staining of FFPE human kidney with COL4A antibody recombinant mouse mAb (clone rCOL4/4742). HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.



SDS-PAGE analysis of purified, BSA-free COL4A antibody as confirmation of integrity and purity.

Description

COL4A Antibody Recombinant Mouse MAb detects Collagen type IV, a major structural component of basement membranes and a critical element of the extracellular matrix. The clone rCOL4/4742 is a recombinant mouse monoclonal antibody developed for consistent research performance and supports evaluation of basement membrane organization in normal and diseased tissues.

COL4A antibody, also referred to as Collagen IV antibody and Type IV collagen antibody in the literature, recognizes network-forming collagen chains encoded by the COL4A gene family, including COL4A1, COL4A2, COL4A3, COL4A4, COL4A5, and COL4A6. Unlike fibrillar collagens such as type I or type III collagen, Collagen IV assembles into a sheet-like scaffold that forms the structural backbone of basement membranes. These supramolecular networks interact with laminins, nidogens, and heparan sulfate proteoglycans to stabilize epithelial and endothelial layers while regulating cell adhesion, migration, differentiation, and filtration barrier function.

Collagen IV is widely distributed in vascular basement membranes, kidney glomeruli, lung alveolar septa, skeletal muscle endomysium, and epithelial basement membrane zones throughout the body. In renal tissue, Collagen IV outlines glomerular capillary loops and tubular basement membranes, while in other organs it highlights vascular and glandular basement membranes. This linear extracellular staining pattern makes a COL4A Antibody Recombinant Mouse MAb particularly useful for studying tissue architecture, angiogenesis, extracellular matrix remodeling, and tumor invasion where basement membrane integrity is disrupted.

Genetic alterations in COL4A family members are associated with hereditary nephropathies such as Alport syndrome, cerebrovascular small vessel disease, and ocular abnormalities. In oncology research, degradation or discontinuity of Collagen IV staining can indicate basement membrane breakdown and invasive potential. A COL4A Antibody Recombinant Mouse MAb such as clone rCOL4/4742 supports investigations into extracellular matrix biology, epithelial-mesenchymal transition, vascular pathology, and organ-specific basement membrane structure. This antibody targets Collagen IV in research applications and is available from NSJ Bioreagents.

Application Notes

Optimal dilution of the COL4A antibody recombinant mouse mAb should be determined by the researcher.

Immunogen

Purified human placental extract was used as the immunogen for the COL4A antibody recombinant mouse mAb.

Storage

Store the COL4A antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

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