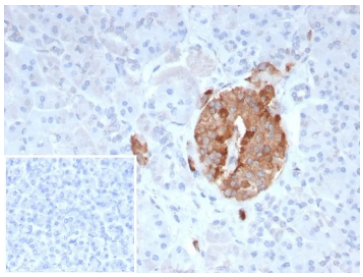
COL4A3 Antibody Recombinant Rabbit MAb / Collagen IV [clone COL4A3/9395R] (V5400)

Catalog No.	Formulation	Size
V5400-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V5400-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V5400SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

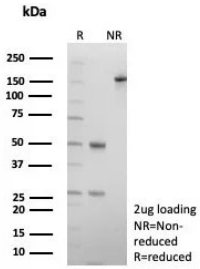
Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	COL4A3/9395R
Purity	Protein A/G affinity
UniProt	P02462, P08572, P29400, P53420
Applications	Immunohistochemistry (FFPE): 1-2ug/ml
Limitations	This Collagen IV/COL4A3 antibody is available for research use only.



Immunohistochemistry of COL4A3 antibody in human pancreas tissue. Formalin-fixed, paraffin-embedded human pancreas was stained using recombinant rabbit monoclonal COL4A3 antibody (clone COL4A3/9395R). 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. Brown chromogenic signal outlines basement membrane structures and vascular profiles, consistent with Collagen IV alpha 3 chain localization in the extracellular matrix. The inset shows PBS used in place of primary antibody as a secondary-only negative control.



SDS-PAGE analysis of purified, BSA-free COL4A3 antibody (clone COL4/9395R) as confirmation of integrity and purity.

Description

COL4A3 Antibody Recombinant Rabbit MAb detects Collagen type IV alpha 3 chain, a critical component of basement membrane networks encoded by the COL4A3 gene. This recombinant rabbit monoclonal antibody recognizes Collagen IV in research applications and supports evaluation of specialized basement membranes, particularly in renal and pulmonary tissues.

COL4A3 antibody, also referred to as Collagen IV antibody and alpha 3 type IV collagen antibody in the literature, targets one of the six alpha chains that assemble into the Collagen IV heterotrimeric scaffold. The alpha 3 chain associates with alpha 4 and alpha 5 chains to form a distinct network highly enriched in the glomerular basement membrane. Unlike fibrillar collagens, Collagen IV forms a sheet-like extracellular matrix structure that interacts with laminins, nidogens, and heparan sulfate proteoglycans to provide mechanical stability and regulate cell adhesion, filtration barrier function, and tissue compartmentalization.

COL4A3 expression is particularly prominent in the kidney glomerulus, lung alveolar basement membranes, cochlea, and certain ocular structures. In tissue-based analyses, Collagen IV alpha 3 chain typically demonstrates linear basement membrane staining outlining capillary loops and epithelial interfaces. This pattern supports studies of glomerular integrity, vascular biology, and extracellular matrix remodeling in developmental and disease models.

Pathogenic variants in COL4A3 are associated with hereditary nephropathies including Alport syndrome and thin basement membrane disease, where disruption of the Collagen IV network compromises renal filtration. Altered Collagen IV composition is also implicated in tumor progression and microenvironment remodeling. A COL4A3 Antibody Recombinant Rabbit MAb can therefore assist in investigations of basement membrane structure, renal pathology, and extracellular matrix biology. This antibody targets Collagen IV alpha 3 chain in research applications and is available from NSJ Bioreagents.

Application Notes

Optimal dilution of the Collagen IV/COL4A3 antibody recombinant rabbit mAb should be determined by the researcher.

Immunogen

A recombinant fragment (within amino acids 1400-1670) of human COL4A protein was used as the immunogen for the Collagen IV/COL4A3 antibody recombinant rabbit mAb.

Storage

Aliquot the Collagen IV/COL4A3 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Copyright © NSJ Bioreagents. All rights reserved.