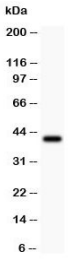
Collagen IV Antibody Rabbit Polyclonal / COL4A1 (R31524)

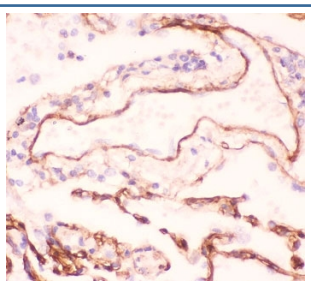
Catalog No.	Formulation	Size
R31524	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2.5% BSA and 0.025% sodium azide
Gene ID	1282
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 0.5-1ug/ml
Limitations	This Collagen IV antibody is available for research use only.



Western blot testing of Collagen IV antibody rabbit polyclonal and recombinant human partial protein 0.5ng.



Immunohistochemistry of Collagen IV antibody in human lung cancer tissue. Formalin-fixed, paraffin-embedded human lung carcinoma tissue was stained using a rabbit polyclonal Collagen IV antibody. Heat induced epitope retrieval was performed by boiling tissue sections in 10mM citrate buffer, pH 6, for 10-20 min followed by cooling prior to staining. Linear brown chromogenic staining highlights basement membrane structures surrounding tumor nests and vascular channels, consistent with Collagen type IV alpha 1 chain localization in the extracellular matrix.

Description

Collagen IV Antibody Rabbit Polyclonal detects Collagen type IV alpha 1 chain, a major structural component of basement membranes encoded by the COL4A1 gene. This rabbit polyclonal antibody is suitable for research applications focused on evaluating basement membrane organization, extracellular matrix structure, and vascular integrity in experimental models.

Collagen IV antibody, also referred to as Type IV collagen antibody and COL4A1 antibody in the literature, targets one of the principal alpha chains that assemble into the Collagen IV heterotrimeric network. Unlike fibrillar collagens, Collagen IV forms a sheet-like scaffold within basement membranes, where it interacts with laminins, nidogens, and heparan sulfate proteoglycans to provide mechanical stability and regulate cell adhesion, migration, and differentiation. The COL4A1 gene product is widely expressed in endothelial and epithelial basement membranes and contributes to structural support of tissues such as kidney glomeruli, lung alveoli, skeletal muscle, and brain vasculature.

In histologic analyses, Collagen IV typically demonstrates continuous linear staining along basement membrane zones, outlining blood vessels, glands, and epithelial-stromal interfaces. This characteristic pattern makes a Collagen IV Antibody Rabbit Polyclonal useful for investigating tissue architecture, angiogenesis, and matrix remodeling in developmental and disease contexts. Alterations in COL4A1 expression or structure have been associated with cerebrovascular disease, small vessel pathology, ocular abnormalities, and hereditary basement membrane disorders.

Basement membrane disruption is a key feature of tumor invasion, and Collagen IV assessment is frequently incorporated into studies examining epithelial-mesenchymal transition and cancer progression. A Collagen IV Antibody Rabbit Polyclonal can support research into extracellular matrix dynamics, vascular integrity, and organ-specific basement membrane biology. This antibody targets COL4A1 in research applications and is available from NSJ Bioreagents.

Application Notes

The stated application concentrations are suggested starting amounts. Titration of the Collagen IV antibody rabbit polyclonal may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

Human partial recombinant protein (AA 1445-1669) was used as the immunogen for this Collagen IV antibody rabbit polyclonal.

Storage

After reconstitution, the Collagen IV antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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