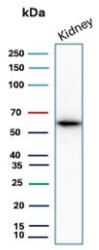
OCLN Antibody Recombinant Monoclonal / Occludin [clone rOCLN/8525] (V5086)

Catalog No.	Formulation	Size
V5086-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V5086-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V5086SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

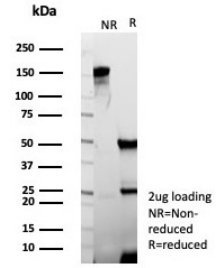
Recombinant | MOUSE MONOCLONAL

Bulk quote request

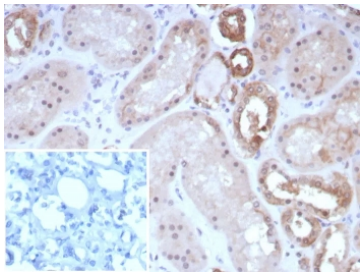
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Recombinant Mouse Monoclonal
Isotype	Mouse IgG1, kappa
Clone Name	rOCLN/8525
Purity	Protein A/G affinity
UniProt	Q16625
Localization	Cell Surface, Cytoplasm
Applications	Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT Western blot: 2-4ug/ml
Limitations	This OCLN antibody is available for research use only.



Western blot analysis of OCLN antibody in human kidney tissue lysate. The recombinant monoclonal clone rOCLN/8525 detects a distinct band at approximately 59 kDa, consistent with the predicted molecular weight of Occludin. The observed band intensity and size align with expected endogenous OCLN expression in renal epithelial tissue, supporting specific detection of the tight junction-associated protein in human kidney lysate.



SDS-PAGE analysis of purified, BSA-free OCLN antibody (clone rOCLN/8525) as confirmation of integrity and purity.



Immunohistochemistry of OCLN antibody in human kidney tissue. The recombinant monoclonal clone rOCLN/8525 demonstrates membranous HRP-DAB brown staining along renal tubular epithelial cell borders, consistent with tight junction localization of Occludin. Staining highlights apical lateral cell-cell junctions within tubular structures, while surrounding interstitial regions show minimal background signal. The negative control inset, using PBS in place of the primary antibody, shows no specific staining. Heat-induced epitope retrieval was performed by boiling tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 minutes followed by cooling prior to incubation.

Description

OCLN antibody recognizes Occludin, a four-pass transmembrane tight junction protein encoded by the OCLN gene that is essential for epithelial and endothelial barrier integrity. OCLN Antibody Recombinant Monoclonal is designed to detect this junctional protein that regulates paracellular permeability and maintains apical-basal polarity in organized tissues. Occludin localizes primarily to the plasma membrane at tight junction complexes, forming continuous belt-like structures at cell-cell borders where it interacts with claudins, TJP1, and the actin cytoskeleton.

Occludin antibody, also referred to as OCLN antibody and tight junction Occludin antibody in the literature, targets a structural component widely expressed in epithelial tissues including intestine, kidney, lung, and liver, as well as in endothelial barriers such as the blood-brain barrier. Within cells, Occludin is concentrated at apical junctional complexes and plays a central role in controlling selective permeability between adjacent cells. Loss of membrane localization or reduced expression of Occludin is frequently associated with increased barrier permeability and tissue injury.

Structurally, Occludin contains four transmembrane domains, two extracellular loops, and cytoplasmic N-terminal and C-terminal domains. The C-terminal cytoplasmic region is critical for tight junction assembly and interaction with scaffolding proteins such as TJP1. Post-translational modifications including phosphorylation regulate Occludin trafficking, tight junction stability, and barrier function. Altered phosphorylation can lead to redistribution away from junctional membranes and contribute to inflammatory and ischemic barrier dysfunction.

Changes in OCLN expression have been implicated in inflammatory bowel disease, acute lung injury, renal ischemia-reperfusion injury, and blood-brain barrier disruption. In cancer biology, tight junction remodeling and altered Occludin expression can influence tumor cell polarity and invasion by modifying intercellular adhesion. Because barrier breakdown is a hallmark of numerous pathological processes, OCLN antibody remains an important tool for studying epithelial integrity and junctional organization.

This recombinant mouse monoclonal antibody clone rOCLN/8525 targets Occludin for research applications involving tight junction biology, epithelial barrier regulation, and tissue injury models. By enabling detection of OCLN expression and localization, this Occludin antibody supports investigations into barrier function and junctional protein dynamics at NSJ Bioreagents.

Application Notes

Optimal dilution of the OCLN antibody should be determined by the researcher.

Immunogen

A recombinant human protein fragment (within amino acids 282-415) was used as the immunogen for the OCLN antibody.

Storage

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

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