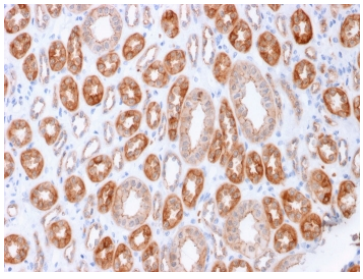
Occludin Antibody Microarray Validated / OCLN [clone OCLN/2183] (V7647)

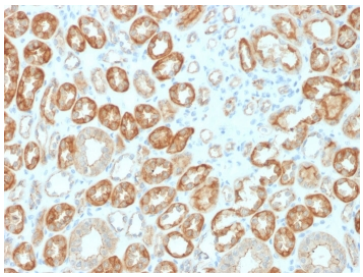
Catalog No.	Formulation	Size
V7647-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V7647-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V7647SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

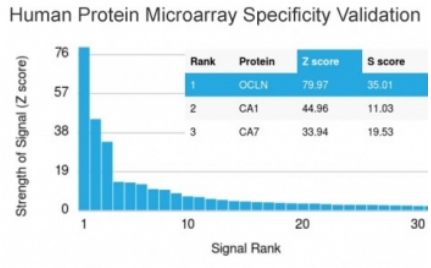
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	OCLN/2183
Purity	Protein G affinity chromatography
UniProt	Q16625
Localization	Cell surface, cytoplasmic
Applications	Immunohistochemistry (FFPE): 1-2ug/ml
Limitations	This Occludin antibody is available for research use only.



Immunohistochemistry of Occludin antibody in human kidney tissue. The microarray validated clone OCLN/2183 demonstrates strong 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 forming continuous circumferential patterns within tubular structures, while surrounding interstitial tissue shows minimal background signal. Heat-induced epitope retrieval was performed by boiling tissue sections in pH 9 10mM Tris with 1mM EDTA for 10-20 minutes followed by cooling prior to incubation.

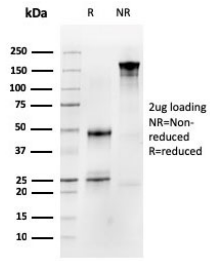


IHC staining of FFPE human kidney with Occludin antibody (clone OCLN/2183). HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 10-20 min and allow to cool before testing.



HuProt human protein microarray specificity analysis of Occludin antibody clone OCLN/2183. The microarray validated monoclonal antibody was screened against more than 19,000 full-length human proteins. OCLN ranked as the top hit with the highest signal intensity, demonstrating strong target specificity relative to other proteins on the array.

Z-score represents the strength of the signal generated when the antibody, together with a fluorescently labeled anti-IgG secondary antibody, binds to a specific protein on the HuProt array. Z-scores are expressed in units of standard deviations above the mean signal of all proteins on the array. When proteins are ranked in descending order by Z-score, the S-score reflects the difference in standard deviations between adjacent ranked proteins. The S-score therefore indicates the relative specificity of the antibody for its intended target compared with other proteins on the array.



SDS-PAGE analysis of purified, BSA-free Occludin antibody (clone OCLN/2183) as confirmation of integrity and purity.

Description

Occludin antibody recognizes Occludin, a four-pass transmembrane tight junction protein encoded by the OCLN gene that is essential for epithelial and endothelial barrier integrity. Occludin Antibody Microarray Validated 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.

OCLN antibody, also referred to as 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 monoclonal antibody clone OCLN/2183 targets Occludin for research applications involving tight junction biology, epithelial barrier regulation, and tissue injury models. Microarray validation supports its utility in high-throughput tissue analysis and comparative expression profiling. 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 Occludin antibody should be determined by the researcher.

Immunogen

A recombinant human partial protein (amino acids 282-415) was used as the immunogen for the Occludin antibody.

Storage

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

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