OCLN Antibody for IHC / Occludin [clone MSVA-415M] (V6057)

Catalog No.	Formulation	Size
V6057-100UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	100 ug
V6057-20UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	20 ug

Bulk quote request

Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	MSVA-415M
Purity	Protein G affinity
UniProt	Q16625
Localization	Cell junction, Cell membrane, Tight junction
Applications	Immunohistochemistry (FFPE): 1:100-1:200
Limitations	This OCLN antibody for IHC is available for research use only.



OCLN Antibody for IHC Tissue Microarray (TMA). Immunohistochemistry analysis of Occludin OCLN in formalin-fixed paraffin-embedded human normal and cancer tissue microarrays using recombinant mouse monoclonal OCLN antibody clone MSVA-415M. Tissue microarray (TMA) staining with HRP-DAB brown chromogen demonstrates distinct membranous localization at apical lateral cell-cell borders in epithelial tissues, consistent with tight junction distribution, while most non-epithelial tissues show minimal to absent staining. Within tumor tissue microarrays, staining intensity and distribution vary depending on tumor differentiation and epithelial origin, reflecting alterations in cell-cell junction integrity. Evaluation across large TMA panels enables direct comparison of OCLN expression across diverse tissue types under standardized conditions. The observed staining patterns align with reported OCLN expression profiles in the Human Protein Atlas, supporting its role as a tight junction-associated epithelial marker.

Description

OCLN antibody recognizes Occludin, a four-pass transmembrane tight junction protein encoded by the OCLN gene that

plays a central role in epithelial and endothelial barrier integrity. OCLN Antibody for IHC is optimized for detecting Occludin expression in formalin-fixed, paraffin-embedded tissue specimens used in histopathology and barrier biology research. Occludin localizes primarily to the plasma membrane at tight junction complexes, where it forms continuous belt-like structures at apical cell-cell borders and interacts with claudins, TJP1, and the actin cytoskeleton to regulate paracellular permeability.

Occludin antibody, also referred to in the literature as OCLN antibody and tight junction Occludin antibody, targets a structural component widely expressed in epithelial tissues including kidney, intestine, lung, and liver, as well as in endothelial barriers such as the blood-brain barrier. In tissue sections, Occludin is typically observed along apical lateral membranes of epithelial cells, highlighting tight junction architecture. Disruption, redistribution, or reduced expression of Occludin is commonly associated with barrier dysfunction in inflammatory, ischemic, and neoplastic conditions.

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 and junctional stability. Altered phosphorylation can result in internalization or fragmentation of tight junction complexes, contributing to increased permeability and epithelial injury.

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, remodeling of tight junctions and altered Occludin expression can influence tumor cell polarity and invasion. Because tight junction integrity is essential for maintaining tissue homeostasis, OCLN antibody remains an important tool for evaluating epithelial organization and barrier status in research settings.

This mouse monoclonal antibody clone MSVA-415M targets Occludin for tissue-based research applications. By enabling visualization of OCLN expression patterns in formalin-fixed specimens, this Occludin antibody supports investigations into tight junction biology and epithelial barrier regulation at NSJ Bioreagents.

This antibody is also part of a broader collection of IHC antibodies validated by tissue microarray analysis, supporting consistent staining across normal and cancer tissues.

Application Notes

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

2. Manual Protocol: Freshly cut sections should be used (less than 10 days between cutting and staining). Heat-induced antigen retrieval for 5 minutes in an autoclave at 121oC in pH 7.8 Target Retrieval Solution buffer. Apply the antibody at a dilution of 1:150 at 37oC for 60 minutes. Visualization of bound antibody by the EnVision Kit (Dako, Agilent) according to the manufacturer's directions.

Immunogen

A recombinant fragment of human Occludin protein (around amino acids 282-415) (exact sequence is proprietary) was used as the immunogen for the OCLN/Occludin antibody.

Storage

OCLN/Occludin antibody with sodium azide - store at 2 to 8oC; antibody without sodium azide - store at -20 to -80oC.

Alternate Names

OCLN Immunohistochemistry Antibody, Occludin IHC Antibody

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