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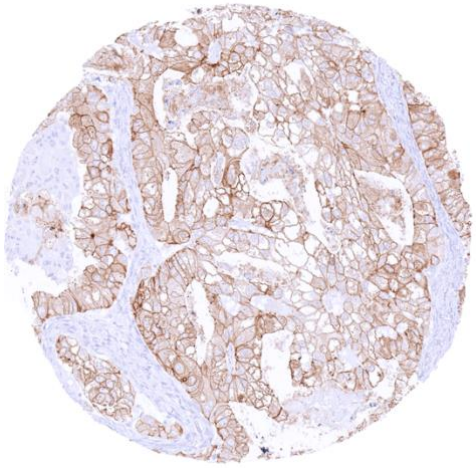
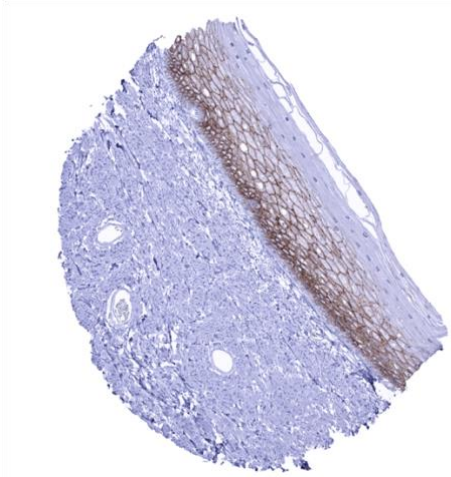
Anti - Occludin Antibody
MSVA-415M / Mouse monoclonal

Human SwissProt	Q16625
Human Gene Symbol	OCLN
Synonyms	BLCPMG; Occludin; OCLN; Phosphatase 1 regulatory subunit 115; PTORCH1; Tight junction protein occludin
Specificity	Occludin
Immunogen	Recombinant fragment of human Occludin protein (around aa 282-415) (exact sequence is proprietary)
Isotype	Mouse / IgG1, kappa
Species Reactivity	Human
Localization	Cell Surface and Cytoplasmic

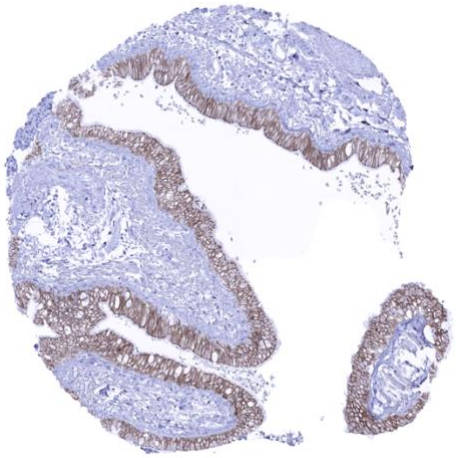
Storage & Stability	Antibody with azide – store at 2 to 8 C. Antibody without azide – store at -20 to -80 C. Antibody is stable for 24 months. Non-hazardous. No MSD required.
Supplied As	200ug/ml of Ab Purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available without BSA
Positive Control	Colon: A strong membranous occludin staining of epithelial cells should be seen with a particularly strong staining at the apical/luminal membranes.
Negative Control	Colon: All non-epithelial and non-endothelial cells must not show any occludin staining.



Clear cell ovarian carcinoma with moderate occludin staining of tumor cells.



In squamous epithelium, occludin positivity is regularly seen but staining is reduced or absent in basal and superficial cell layers.



Membranous occludin immunostaining of respiratory epithelium.

Biology

Occludin (OCLN) is a 65 kDa plasma-membrane that constitutes an essential component of tight junctions. Together with other proteins such as claudins and zonula occludens-1 (ZO-1), occludin regulates the formation, maintenance, and function of tight junctions and thus enables its stability and barrier function. As a NADH oxidase, occludin influences critical aspects of cell metabolism like glucose uptake, ATP production and gene expression. In normal tissues, a membranous occludin staining is seen in endothelial cells and in the vast majority of epithelial cell types. In squamous epithelium, staining intensity is highest in suprabasal and intermediate cell types while staining is absent or reduced in the basal cell layer and decreases towards the surface. In many other epithelial cell types such as in the gastrointestinal tract, gallbladder, endometrium, endocervix, fallopian tube, and respiratory epithelium, a diffuse membranous staining occurs but staining is most intense at the luminal/apical membranes. In cancer, occludin expression has been described in many different entities but - as compared to normal tissues - occludin expression may often be lower. Reduced occludin expression has been linked to tumor progression, metastasis and poor prognosis in studies.

Potential Research Applications

The prognostic impact of occludin expression levels are unclear for many tumor types. Studies comparing occludin expression levels between different tumor entities are lacking.

Protocol Suggestions

Dilution: 1:150. pH 9 is optimal. Freshly cut sections should be used (more than 10 days between cutting and staining deteriorates staining intensity for most antibodies in IHC).

Limitations

This antibody is available for **research use only** and is not approved for use in diagnostics.

Warranty

There are no warranties, expressed or implied, which extend beyond this description. MSVA is not liable for any personal injury or economic loss resulting from this product.

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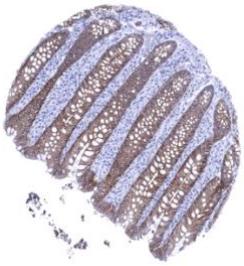
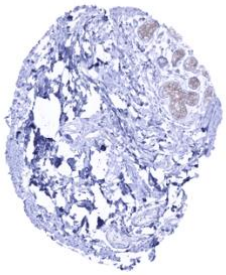
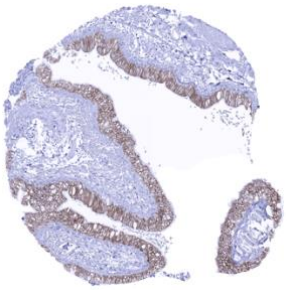


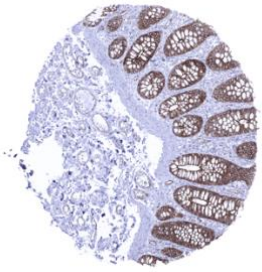
Appendix, mucosa – Diffuse membranous occludin staining of all epithelial cells. Highest intensity occurs at the apical membranes



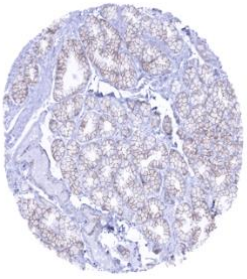
Breast – Luminal cells show a moderate membranous occludin immunostaining while basal lack staining



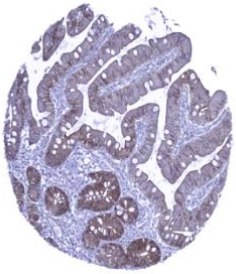
Bronchus, mucosa – Membranous occludin immunostaining of respiratory epithelium is strongest at the apical membrane



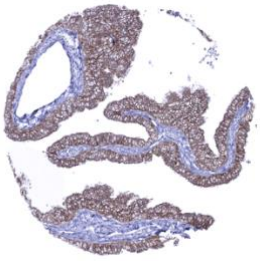
Colon descendens, mucosa – Membranous occludin staining of epithelial cells. Highest intensity occurs at the apical membranes



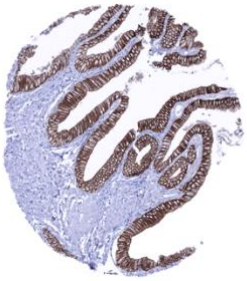
Duodenum, Brunner gland – Membranous occludin staining of moderate intensity in glandular cells of Brunner glands



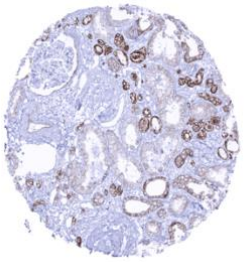
Duodenum, mucosa – Membranous occludin staining of variable intensity. Often, staining is most intense at the apical membranes



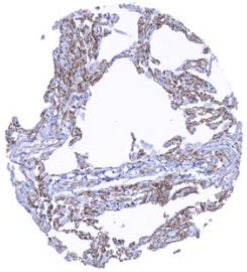
Fallopian tube, mucosa – Membranous occludin positivity is diffuse but strongest at the apical membrane



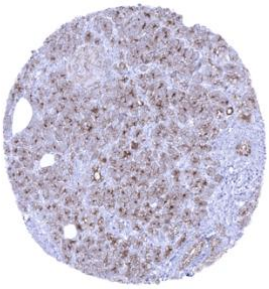
Gallbladder, epithelium – Diffuse strong membranous occludin staining. Highest intensity occurs at the apical membranes



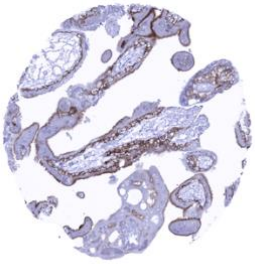
Kidney, cortex – Occludin staining is strongest in collecting ducts, weaker in distal tubuli and weakest in proximal tubuli of the kidney



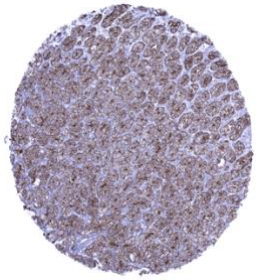
Lung – Both pneumocytes and endothelial cells show a membranous occludin immunostaining while macrophages remain negative



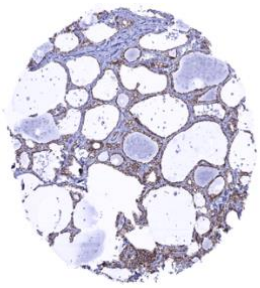
Pancreas – Membranous occludin staining is strongest at apical membranes of acinar cells and only weak in islet cells



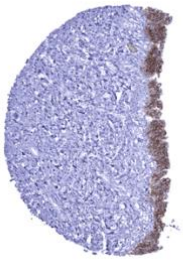
Placenta, early – Membranous occludin immunostaining predominates in the cytotrophoblast and at the luminal membrane of the syncytiotrophoblast



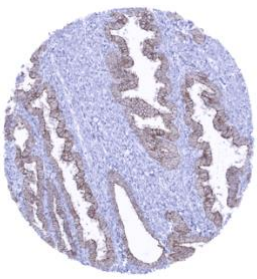
Stomach, antrum – In stomach glands, occludin staining is strongest at the apical membranes



Thyroid gland – Intense membranous occludin immunostaining of follicular cells



Urinary bladder, urothelium – Strong occludin staining of all urothelial cell layers



Uterus, endometrium (secretion) – Membranous occludin immunostaining is diffuse but strongest at the apical membrane