abcam

ab222691

# Anti-Occludin antibody

## Key facts

| | |
|---|---|
| **Isotype** | IgG |
| **Host species** | Rabbit |
| **Storage buffer** | pH: 7.4 Preservative: 0.02% Proclin 300 Constituents: 50% Glycerol (glycerin, glycerine), 48.98% TBS, 1X, 1% BSA |
| **Form** | Liquid |
| **Clonality** | Polyclonal |
| **Immunogen** | Synthetic Peptide within Mouse Ocln aa 450 to C-terminus conjugated to Keyhole Limpet Haemocyanin. The exact immunogen used to generate this antibody is proprietary information. Database link Q61146 |
| **Purification technique** | Affinity purification Protein A |
| **Concentration** | 1 mg/mL The concentration of this product may be batch-dependent<br>Batch concentration finder → |

## Reactivity data

## Flow Cyt

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |
| **Notes** | - |

### Expected

| | |
|---|---|
| **Species** | Mouse |
| **Dilution info** | Use at an assay dependent concentration. |
| **Notes** | - |

### Predicted

| | |
|---|---|
| **Species** | Rat, Pig |
| **Dilution info** | - |
| **Notes** | - |

## WB

### Tested

| | |
|---|---|
| **Species** | Mouse |
| **Dilution info** | 1/100 - 1/1000 |
| **Notes** | - |

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/100 - 1/1000 |
| **Notes** | - |

### Predicted

| | |
|---|---|
| **Species** | Rat, Pig |
| **Dilution info** | - |
| **Notes** | - |

# Target data

See full target information OCLN

| | |
|---|---|
| **Function** | May play a role in the formation and regulation of the tight junction (TJ) paracellular permeability barrier. It is able to induce adhesion when expressed in cells lacking tight junctions. (Microbial infection) Acts as a coreceptor for hepatitis C virus (HCV) in hepatocytes. |

## Storage

| | |
|---|---|
| **Shipped at conditions** | Blue Ice |
| **Appropriate short-term storage duration** | 1-2 weeks |
| **Appropriate short-term storage conditions** | +4°C |
| **Appropriate long-term storage conditions** | -20°C |
| **Aliquoting information** | Upon delivery aliquot |
| **Storage information** | Avoid freeze / thaw cycle |

## Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

| | |
|---|---|
| **Activity summary** | Occludin is a protein that plays an important mechanical role in forming tight junctions which are specialized connections between neighboring cell membranes. Alternative names for this target include occludin-1. The occludin protein has a molecular weight of approximately 65 kDa. It is expressed in a variety of tissues but levels tend to be high in epithelial and endothelial cells where tight junctions are essential for barrier functions. Occludin acts as integral membrane protein contributing to the complex structures that seal spaces between cells. |
| **Biological function summary** | Occludin serves as an important component in maintaining cell-to-cell adhesion within tight junction complexes. It interacts with other tight junction proteins such as claudins and junctional adhesion molecules to regulate paracellular permeability. These interactions help maintain selective barrier properties of epithelial and endothelial layers preventing the passage of large molecules and pathogens while allowing passage of ions and small molecules. Occludin stabilizes the tight junctions by interacting with the cytoskeleton and signaling proteins that are important for tight junction assembly and maintenance. |
| **Pathways** | Occludin functions prominently in the regulation of tight junction integrity and barrier function. It participates in pathways such as the tight junction signaling pathway and the paracellular transport pathway. Occludin interacts with ZO-1 a scaffolding protein bridging its interaction with the actin cytoskeleton which supports the structural organization and function of tight junctions. This connectivity allows for regulation of the permeability and transport across the epithelial barrier. |
| **Associated diseases and disorders** | Disruptions in occludin function are connected to conditions such as inflammatory bowel disease (IBD) and some cancers. In IBD abnormal occludin expression can compromise intestinal barrier function leading to increased intestinal permeability and an inflammatory response. In certain cancers loss of occludin expression is linked to increased invasiveness and metastasis due to weakened cell adhesion. |

The dysfunction of proteins like ZO-1 which interact with occludin in these pathways also contributes to these pathological states highlighting the importance of occludin's regulatory roles in maintaining cellular barrier integrity.

## Product promise

**Tested**

We have tested this species and application combination and it works. It is covered by our product promise.

**Expected**

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

**Predicted**

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

**Not recommended**

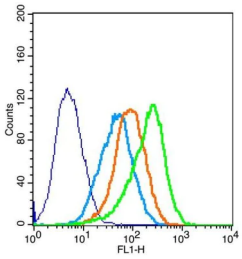
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

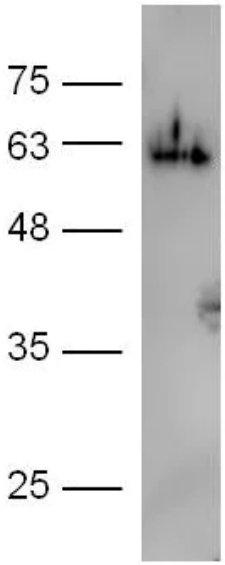
## 2 product images




### Flow Cytometry - Anti-Occludin antibody (ab222691)

Occludin Flow Cytometry staining using rabbit Anti-Occludin antibody

Flow Cytometry analysis of 293T cells labelling Occludin with ab222691 at 1/100 for 30 minutes compared to control cells (dark blue), secondary only (light blue) and isotype control (orange)




## Western blot - Anti-Occludin antibody (ab222691)

All lanes:
Western blot - Anti-Occludin antibody (ab222691) at 1/300 dilution

All lanes:
A549 cell lysate

Secondary

All lanes:
Goat Anti-Goat Anti-Rabbit IgG Antibody (H+L), HRP Conjugated at 1/5000 dilution

Predicted band size: 59 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.