

Occludin (369.7): sc-81812

BACKGROUND

Occludin is an integral membrane protein closely associated with the tight junctions of epithelial and endothelial cells. Occludin is a tetraspan integral membrane protein in epithelial and endothelial tight junction (TJ) structures that can contain two extracellular loops. The protein exists in a variety of phosphorylated forms. Phosphorylation is involved in regulating both the localization and the function of Occludin. Expression of Occludin is upregulated by polyunsaturated fatty acids, increasing transendothelial cell resistance and reducing cellular permeability to large molecules. The level of Occludin varies greatly depending on tissue; in brain tissue, Occludin is highly expressed at cell-cell contact sites. Non-neural tissues show lower expression and discontinuous distribution. Upregulation of epithelial Occludin may play a role in enhancing paracellular permeability and be related to the damage to the tight junction.

REFERENCES

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2. Tsukita, S., Furuse, M. and Itoh, M. 1996. Molecular dissection of tight junctions. *Cell Struct. Funct.* 21: 381-385.
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6. Jiang, W.G., Bryce, R.P., Horrobin, D.F. and Mansel, R.E. 1998. Regulation of tight junction permeability and Occludin expression by poly-unsaturated fatty acids. *Biochem. Biophys. Res. Commun.* 244: 414-420.
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CHROMOSOMAL LOCATION

Genetic locus: OCLN (human) mapping to 5q13.2.

SOURCE

Occludin (369.7) is a mouse monoclonal antibody raised against recombinant Occludin of human origin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PRODUCT

Each vial contains 100 µg IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Occludin (369.7) is recommended for detection of Occludin of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Occludin siRNA (h): sc-36117 and Occludin siRNA (h2): sc-44316; and as shRNA Plasmid control antibody for Occludin shRNA Plasmid (h): sc-36117-SH and Occludin shRNA Plasmid (h2): sc-44316-SH.

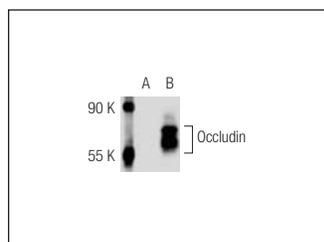
Molecular Weight of Occludin: 60-82 kDa.

Positive Controls: COLO 320DM cell lysate: sc-2226, ECV304 cell lysate: sc-2269 or HeLa whole cell lysate: sc-2200.

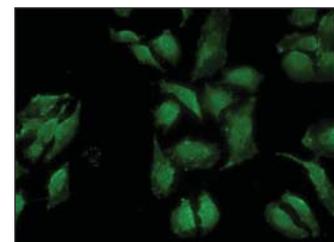
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Occludin (369.7): sc-81812. Western blot analysis of Occludin expression in non-transfected: sc-117752 (A) and human Occludin transfected: sc-114467 (B) 293T whole cell lysates.



Occludin (369.7): sc-81812. Immunofluorescence staining of paraformaldehyde-fixed HeLa cells showing membrane and cytoplasmic localization.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.