

Occludin (H-279): sc-5562

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. Nonneural 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.

CHROMOSOMAL LOCATION

Genetic locus: OCLN (human) mapping to 5q13.2; Ocln (mouse) mapping to 13 D1.

SOURCE

Occludin (H-279) is a rabbit polyclonal antibody raised against amino acids 132-411 mapping within an internal region of Occludin of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Occludin (H-279) is recommended for detection of Occludin of mouse, rat and 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).

Occludin (H-279) is also recommended for detection of Occludin in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Occludin siRNA (h): sc-36117, Occludin siRNA (m): sc-36118, Occludin shRNA Plasmid (h): sc-36117-SH, Occludin shRNA Plasmid (m): sc-36118-SH, Occludin shRNA (h) Lentiviral Particles: sc-36117-V and Occludin shRNA (m) Lentiviral Particles: sc-36118-V.

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.

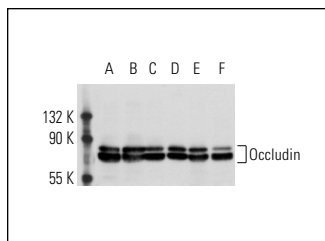
STORAGE

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.

DATA



Occludin (H-279): sc-5562. Western blot analysis of Occludin expression in HeLa (A), COLO 320DM (B), ECV304 (C), MDCK (D), T84 (E) and A-431 (F) whole cell lysates.

SELECT PRODUCT CITATIONS

- Ye, L., et al. 2003. Biphasic effects of 17-β estradiol on expression of occludin and transendothelial resistance and paracellular permeability in human vascular endothelial cells. *J. Cell. Physiol.* 196: 362-369.
- Lee, S.W., et al. 2003. SSeCKS regulates angiogenesis and tight junction formation in blood-brain barrier. *Nat. Med.* 9: 900-906.
- Lee, N.P., et al. 2003. Regulation of Sertoli cell tight junction dynamics in the rat testis via the nitric oxide synthase/soluble guanylate cyclase/3',5'-cyclic guanosine monophosphate/protein kinase G signaling pathway: an *in vitro* study. *Endocrinology* 144: 3114-3129.
- Martin, T.A., et al. 2010. Loss of occludin leads to the progression of human breast cancer. *Int. J. Mol. Med.* 26: 723-734.
- Martin T.A., et al. 2011. HAVcR-1 reduces the integrity of human endothelial tight junctions. *Anticancer Res.* 31: 467-473.
- Huang, X.N., et al. 2011. The relationship between aquaporin-4 expression and blood-brain and spinal cord barrier permeability following experimental autoimmune encephalomyelitis in the rat. *Anat. Rec.* 294: 46-54.
- Kolasa, A., et al. 2011. DHT deficiency perturbs the integrity of the rat seminiferous epithelium by disrupting tight and adherens junctions. *Folia Histochem. Cytobiol.* 49: 62-71.
- Kosik-Bogacka, D.I., et al. 2011. *Hymenolepis diminuta*: the effects of infection on transepithelial ion transport and tight junctions in rat intestines. *Exp. Parasitol.* 127: 398-404.



Try **Occludin (E-5): sc-133256** or **Occludin (F-11): sc-133255**, our highly recommended monoclonal alternatives to Occludin (H-279). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **Occludin (E-5): sc-133256**.