Revision 1

Occludin Antibody

#5506 Store at -20C

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H Mk	Endogenous	65	Rabbit	#Q16625	100506658

Product Usage Information

Application	Dilution
Western Blotting	1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

Specificity/Sensitivity

Occludin Antibody detects endogenous levels of total occludin protein.

Species predicted to react based on 100% sequence homology

Dog

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to the carboxy terminus of human occludin protein.

Background

Tight junctions, or zona occludens, form a continuous barrier to fluids across the epithelium and endothelium. They function in regulation of paracellular permeability and in the maintenance of cell polarity, blocking the movement of transmembrane proteins between the apical and the basolateral cell surfaces (reviewed in 1). Tight junctions are composed of claudin and occludin transmembrane proteins, which join the junctions to the cytoskeleton (1,2). Occludin is thought to be important in the assembly and maintenance of tight junctions. Differential phosphorylation of occludin at various residues may regulate its interaction with other tight junction proteins such as ZO-1 (3). VEGF-induced phosphorylation of occludin regulates tight junction stability and vascular permeability (4). Expression of occludin as well as claudin1 is required for infection of liver cells by hepatitis C virus (HCV) (5).

Background References

1. Shin, K. et al. (2006) *Annu Rev Cell Dev Biol* 22, 207-35.
2. Oliveira, S.S. and Morgado-Díaz, J.A. (2007) *Cell Mol Life Sci* 64, 17-28.
3. Rao, R. (2009) *Ann N Y Acad Sci* 1165, 62-8.
4. Murakami, T. et al. (2009) *J Biol Chem* 284, 21036-46.
5. Ploss, A. et al. (2009) *Nature* 457, 882-6.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human **Mk:** Monkey

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