Anti-ZO1 Antibody

ER41204

Product Type:	Rabbit polyclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	IF-Cell, IHC-P
Molecular Wt:	Predicted band size: 195 kDa

Description: TJP1, TJP2, and TJP3 are closely related scaffolding proteins that link tight junction (TJ) transmembrane proteins such as claudins, junctional adhesion molecules, and occludin to the actin cytoskeleton. The tight junction acts to limit movement of substances through the paracellular space and as a boundary between the compositionally distinct apical and basolateral plasma membrane domains of epithelial and endothelial cells. Necessary for lumenogenesis, and particularly efficient epithelial polarization and barrier formation. Plays a role in the regulation of cell migration by targeting CDC42BPB to the leading edge of migrating cells. Plays an important role in podosome formation and associated function, thus regulating cell adhesion and matrix remodeling. With TJP2 and TJP3, participates in the junctional retention and stability of the transcription factor DBPA, but is not involved in its shuttling to the nucleus.

Immunogen: Recombinant protein within human ZO1 aa 1,401-1,748.

Positive control: MCF7, human kidney tissue, mouse kidney tissue, rat kidney tissue.

Subcellular location: Cell membrane, cell junction, Cell projection, Gap junction, Membrane, Tight junction.

Database links: SwissProt: Q07157 Human | P39447 Mouse
Entrez Gene: 292994 Rat

Recommended Dilutions:

IF-Cell	1:2,500
IHC-P	1:10,000

Storage Buffer: 1*PBS (pH7.4), 0.2% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃ or -80℃. Avoid repeated freeze / thaw cycles.

Purity: Immunogen affinity purified.

Images

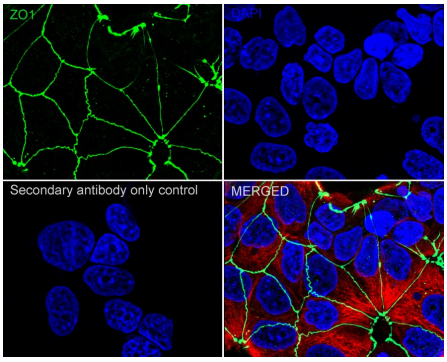

Fig1: Immunocytochemistry analysis of MCF7 cells labeling ZO1 with Rabbit anti-ZO1 antibody (ER41204) at 1/2,500 dilution.

Cells were fixed in 4% paraformaldehyde for 20 minutes at room temperature, permeabilized with 0.1% Triton X-100 in PBS for 5 minutes at room temperature, then blocked with 1% BSA in 10% negative goat serum for 1 hour at room temperature. Cells were then incubated with Rabbit anti-ZO1 antibody (ER41204) at 1/2,500 dilution in 1% BSA in PBST overnight at 4 ℃. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

Beta tubulin (M1305-2, red) was stained at 1/100 dilution overnight at +4℃. Goat Anti-Mouse IgG H&L (iFluor™ 594, HA1126) was used as the secondary antibody at 1/1,000 dilution.

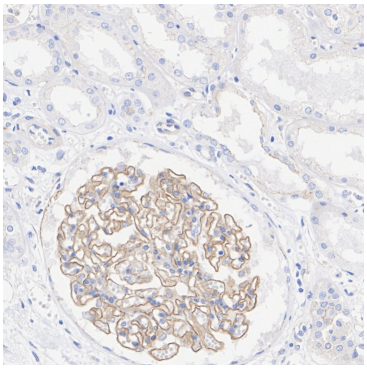

Fig2: Immunohistochemical analysis of paraffin-embedded human kidney tissue with Rabbit anti-ZO1 antibody (ER41204) at 1/10,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ER41204) at 1/10,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

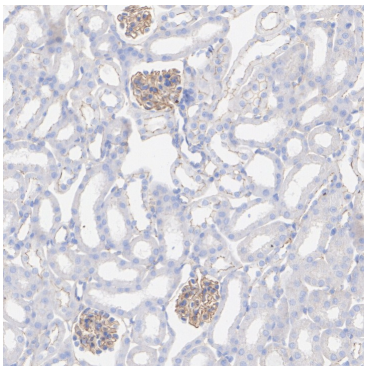

Fig3: Immunohistochemical analysis of paraffin-embedded mouse kidney tissue with Rabbit anti-ZO1 antibody (ER41204) at 1/10,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ER41204) at 1/10,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

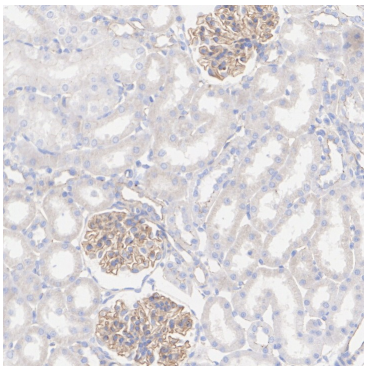

Fig4: Immunohistochemical analysis of paraffin-embedded rat kidney tissue with Rabbit anti-ZO1 antibody (ER41204) at 1/10,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ER41204) at 1/10,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. "Evidence for a functional interaction between cingulin and ZO-1 in cultured cells." D'Atri F., Nadalutti F., Citi S. J. Biol. Chem. 277:27757-27764(2002)
2. "Density-enhanced phosphatase 1 regulates phosphorylation of tight junction proteins and enhances barrier function of epithelial cells." Sallee J.L., Burridge K. J. Biol. Chem. 284:14997-15006(2009)
3. "Cdc42-dependent formation of the ZO-1/MRCKbeta complex at the leading edge controls cell migration." Huo L., Wen W., Wang R., Kam C., Xia J., Feng W., Zhang M. EMBO J. 30:665-678(2011)