

Anti-ZO1 Antibody [PSH28-02]

HA724744



Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse
Applications:	IHC-Fr, IF-Tissue, IF-Cell, FC(Intra)
Molecular Wt:	Predicted band size: 195 kDa
Clone number:	PSH28-02

Description: Zonula occludens-1 ZO-1, also known as Tight junction protein-1 is a 220-kD peripheral membrane protein that is encoded by the TJP1 gene in humans. It belongs to the family of zonula occludens proteins (ZO-1, ZO-2, and ZO-3), which are tight junction-associated proteins and of which, ZO-1 is the first to be cloned. It was first isolated in 1986 by Stevenson and Goodenough using a monoclonal antibody raised in rodent liver to recognise a 225-kD polypeptide in whole liver homogenates and in tight junction-enriched membrane fractions. It has a role as a scaffold protein which cross-links and anchors Tight Junction (TJ) strand proteins, which are fibril-like structures within the lipid bilayer, to the actin cytoskeleton. This gene encodes a protein located on a cytoplasmic membrane surface of intercellular tight junctions. The encoded protein may be involved in signal transduction at cell-cell junctions. Two transcript variants encoding distinct isoforms have been identified for this gene.

Immunogen: Recombinant protein within mouse ZO1 aa 1,401-1,745.

Positive control: Mouse Kidney, Human Kidney, bEnd.3 (Mouse brain microvascular endothelial cell).

Subcellular location: Cell membrane, Cell junction, tight junction, gap junction, Cell projection, podosome.

Database links: SwissProt: Q07157 Human | P39447 Mouse

Recommended Dilutions:

IHC-Fr	1:500
IF-Tissue	1:500
IF-Cell	1:100
FC(Intra)	1:1,000

Storage Buffer: 1*PBS (pH7.4), 0.1% BSA, 40% Glycerol, 0.2% Proclean 950.

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). Store at -20℃ long term.

Purity: Protein A affinity purified.

Hangzhou Huaan Biotechnology Co., Ltd.

Orders:0086-571-88062880

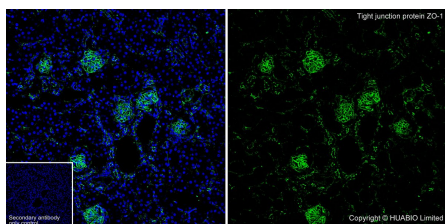
Technical:0086-571-89986345

Service mail:support@huabio.cn

华安生物
HUABIO
www.huabio.cn

Applications:WB=Western blot IHC-P=Immunohistochemistry (paraffin) IF-Cell=Immunofluorescence (Cell) IF-Tissue=Immunofluorescence (Tissue) FC=Flow cytometry IP=Immunoprecipitation

Images

**Fig1:** Application: Immunofluorescence (IHC-Fr)

Species: Mouse

Tissue: Kidney

Sample: Frozen section

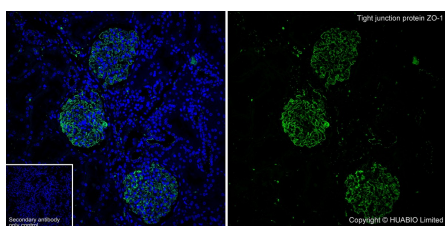
Antigen retrieval: Not required

Wash buffer: 1× TBST

Blocking: 10% normal goat serum + 1% Triton X-100 + 0.3 M Glycine in TBST, 30 minutes at room temperature.

Primary antibody: HA724744, 1/500, overnight at 4°C.

Secondary antibody: Goat Anti-Rabbit IgG (iFluor™ 488, HA1121), 1.5 hours at room temperature.

**Fig2:** Application: Immunofluorescence (IF-tissue)

Species: Human

Tissue: Kidney

Sample: Paraffin-embedded section

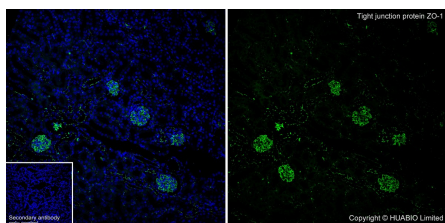
Antigen retrieval: Heat-mediated, Tris-EDTA buffer (pH 9.0), 20 minutes at 95°C.

Wash buffer: 1× TBST

Blocking: 10% normal goat serum + 1% Triton X-100 + 0.3 M Glycine in TBST, 30 minutes at room temperature.

Primary antibody: HA724744, 1/500, overnight at 4°C.

Secondary antibody: Goat Anti-Rabbit IgG (iFluor™ 488, HA1121), 1.5 hours at room temperature.

**Fig3:** Application: Immunofluorescence (IF-tissue)

Species: Mouse

Tissue: Kidney

Sample: Paraffin-embedded section

Antigen retrieval: Heat-mediated, Tris-EDTA buffer (pH 9.0), 20 minutes at 95°C.

Wash buffer: 1× TBST

Blocking: 10% normal goat serum + 1% Triton X-100 + 0.3 M Glycine in TBST, 30 minutes at room temperature.

Primary antibody: HA724744, 1/500, overnight at 4°C.

Secondary antibody: Goat Anti-Rabbit IgG (iFluor™ 488, HA1121), 1.5 hours at room temperature.

Hangzhou Huaan Biotechnology Co., Ltd.

Orders:0086-571-88062880

Technical:0086-571-89986345

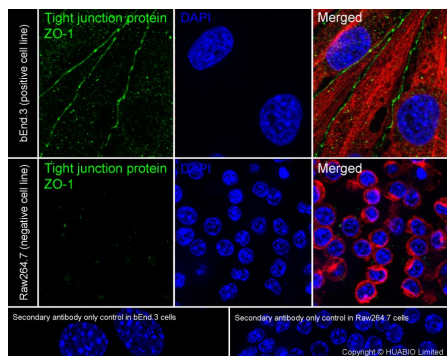
Service mail:support@huabio.cn


 华安生物
HUABIO
www.huabio.cn

Fig4: Application: Immunocytochemistry (IF-cell)

Species: Mouse

Sample: bEnd.3 (Mouse brain microvascular endothelial cell) / RAW264.7 (Mouse monocytic macrophage leukemia cell)



Fixation: 4% Paraformaldehyde, 15 minutes at room temperature.
 Permeabilization: 0.1% Triton X-100, 15 minutes at room temperature.

Blocking: 1% BSA + 10% normal goat serum, 1 hour at room temperature.

Antibody dilution buffer: 1% BSA in PBST.

Primary antibody: HA724744, 1/100, overnight at 4°C.

Secondary antibody: Goat Anti-Rabbit IgG (iFluor™ 488, HA1121), 45 minutes at room temperature.

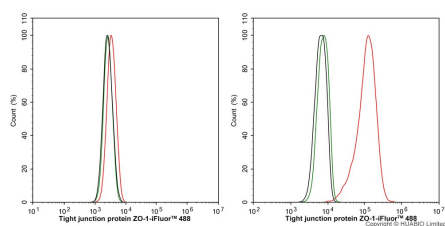
Counterstain: Beta tubulin (HA601187, Red), 1/100, overnight at 4°C. The nuclear counterstain was DAPI (Blue).

Negative expression of ZO1 protein in RAW264.7 cell is consistent with the predicted expression pattern.

Fig5: Application: Flow Cytometry (Intra)

Species: Mouse

Sample: RAW264.7 (Mouse monocytic macrophage leukemia cell) (Left, negative) / bEnd.3 (Mouse brain microvascular endothelial cell)



Fixation: 4% Paraformaldehyde, 15 minutes at room temperature.
 Permeabilization: 0.1% Tween-20, 15 minutes at room temperature.

Blocking: 1% BSA + 10% normal goat serum, 15 minutes at room temperature.

Antibody dilution buffer: 1x PBS.

Primary antibody: HA724744 (1/1,000, Red) compared with Rabbit IgG Isotype Control (HA722127, Green), 15 minutes at room temperature.

Secondary antibody: Goat Anti-Rabbit IgG (iFluor™ 488, HA1121), 15 minutes at room temperature.

Negative expression of ZO1 protein in RAW264.7 cell is consistent with the predicted expression pattern.

Hangzhou Huaan Biotechnology Co., Ltd.

Orders:0086-571-88062880

Technical:0086-571-89986345

Service mail:support@huabio.cn

华安生物
HUABIO
www.huabio.cn

Applications:WB=Western blot IHC-P=Immunohistochemistry (paraffin) IF-Cell=Immunofluorescence (Cell) IF-Tissue=Immunofluorescence (Tissue) FC=Flow cytometry IP=Immunoprecipitation

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

Background References

1. Tsurudome Y et al. Decreased ZO1 expression causes loss of time-dependent tight junction function in the liver of ob/ob mice. Mol Biol Rep. 2022 Dec
2. Han F et al. GLTSCR1 coordinates alternative splicing and transcription elongation of ZO1 to regulate colorectal cancer progression. J Mol Cell Biol. 2022 Jun

Hangzhou Huaan Biotechnology Co., Ltd.

Orders:0086-571-88062880

Technical:0086-571-89986345

Service mail:support@huabio.cn

 华安生物
HUAABIO
www.huabio.cn

Applications:WB=Western blot IHC-P=Immunohistochemistry (paraffin) IF-Cell=Immunofluorescence (Cell) IF-Tissue=Immunofluorescence (Tissue) FC=Flow cytometry IP=Immunoprecipitation