# Anti-ZO1 Antibody [PSH07-09] - BSA and Azide free

# HA751131

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| **Product Type:** | Recombinant Rabbit monoclonal IgG, primary antibodies |
| **Species reactivity:** | Human, Mouse, Monkey, Cynomolgus monkey |
| **Applications:** | WB, IF-Cell |
| **Molecular Wt:** | Predicted band size: 195 kDa |
| **Clone number:** | PSH07-09 |

**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 human ZO1 aa 1,401-1,748.

**Positive control:** A431 cell lysate, 293T cell lysate, HepG2 cell lysate, HeLa cell lysate, U-2 OS cell lysate, NIH/3T3 cell lysate, C2C12 cell lysate, COS-1 cell lysate, Mouse testis tissue lysate, Rat testis tissue lysate, MCF7.

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

**Database links:** SwissProt: Q07157 Human

**Recommended Dilutions:**

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| **WB** | 1:1,000 |
| **IF-Cell** | 1:500-1:2,000 |

**Storage Buffer:** 1*PBS (pH7.4).

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

**Purity:** Protein A affinity purified.

## Images

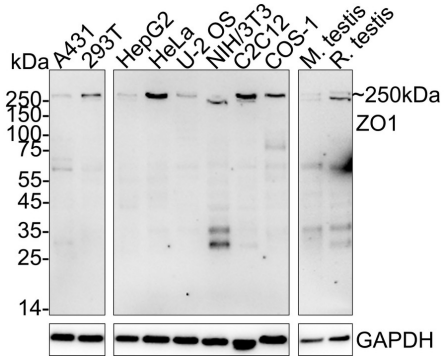


**Fig1:** Western blot analysis of ZO1 on different lysates with Rabbit anti-ZO1 antibody (HA751131) at 1/1,000 dilution.

Lane 1: A431 cell lysate (20 µg/Lane)
Lane 2: 293T cell lysate (20 µg/Lane)
Lane 3: HepG2 cell lysate (20 µg/Lane)
Lane 4: HeLa cell lysate (20 µg/Lane)
Lane 5: U-2 OS cell lysate (20 µg/Lane)
Lane 6: NIH/3T3 cell lysate (20 µg/Lane)
Lane 7: C2C12 cell lysate (20 µg/Lane)
Lane 8: COS-1 cell lysate (20 µg/Lane)
Lane 9: Mouse testis tissue lysate (40 µg/Lane)
Lane 10: Rat testis tissue lysate (40 µg/Lane)

Predicted band size: 195 kDa
Observed band size: 250 kDa

Exposure time: 3 minutes; ECL: K1802;
4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA751131) at 1/1,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

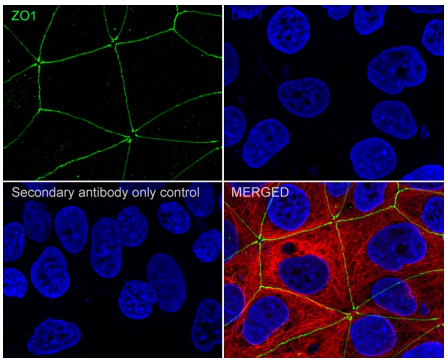


**Fig2:** Immunocytochemistry analysis of MCF7 cells labeling ZO1 with Rabbit anti-ZO1 antibody (HA751131) at 1/2,000 dilution.

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 (HA751131) at 1/2,000 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.

## 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