



Product Specification Sheet

Tight junction protein ZO-1 antibody

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|---------------|--|---------------------|
| Cat # TJP1-A | Rabbit Anti-Mouse ZO-1 antibody | SIZE: 100 µg |
| Cat # TJP1P-A | Rabbit Anti-Mouse phospho (Ser617, Ser622) ZO-1 antibody | SIZE: 100 µg |

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 zona 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. ZO-1 contains three PDZ domains (PDZ1/aa23-109; PDZ2/aa181-261; PDZ3/aa422-502) at its N-terminal end, followed by an SH3 domain (aa519-580), a GUK/GK homology domain (aa632-782), an acidic domain (aa817-894), an alpha spliced domain (aa921-1000), and a C-terminal proline-rich/PR domain. ZO-1 is a phosphoprotein and a known substrate of serine/threonine kinases ZAK and of PKC. ZO-1 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.

Source of Antigen or Antibodies

Uniprot: P39447

Host: Rabbit

Clonality: Polyclonal

Purification: Ammonium sulfate followed by peptide affinity purification.

Immunogen: **TJP1-A:** Synthetic peptide derived from Mouse ZO-1 conjugated to KLH **TJP1P-A:** Synthetic peptide phosphorylated at Serine 617 and 622 derived from Mouse ZO-1

Cross reactivity: The peptide (**TJP1-A**) used as an immunogen exhibits 100% homology with Rat, Sheep, Cat, Bovine, Human, Non-Human Primates, Dog, Horse, and Goat. If your species of interest isn't listed, then contact ADI to perform a BLAST

The peptide (**TJP1P-A**) used as an immunogen exhibits 100% homology with Rat, Human, Non-Human Primate, Zebrafish, Sheep, Goat, Cat, Dog, Horse, Chicken, Xenopus Laevis, and more. If your species of interest is not on this list, contact ADI to perform a BLAST.

Subcellular Location: Plasma membrane, Tight junction, and gap junction

Alternative names: Tight junction protein 1, Zona occludens protein 1, Zonula occludens protein 1

Recommended Secondary Antibody: Goat anti-Rabbit IgG-HRP (**ADI cat#20320**)

Form & Storage of Antibodies

Affinity pure IgG Solution

Concentration: 0.5 mg/ml Volume: 200 µl
Supplied in PBS, pH 7.4 + 0.1% BSA
The antibody can be made available carrier free or conjugated to HRP, Biotin, or FITC on request

Lyophilized powder

Reconstitute powder in 200 µl distilled water to 0.5 mg/ml

Storage:

Short-term: 4°C for 1 month

Long-term: at -20°C or below in suitable aliquots after reconstitution for 1 year. Do not expose to multiple freeze/thaw cycles or store working, diluted solutions. Glycerol may be added to a final concentration of 50% and antibodies can be stored un-aliquoted at -20°C.

Recommended Usage

Western Blotting: 0.5-2.0 µg/ml

Immunohistochemistry: 1-10 µg/ml. QC tested using 10 mM sodium citrate pH 6 antigen retrieval buffer. Minimal staining was observed with no antigen retrieval, the antibody may work better with other antigen retrieval solutions

Immunocytochemistry: 1-10 µg/ml.

The above concentrations are a *suggestion*, user's must optimize their assay based on their own conditions. The antibody may work in other applications. These methods have not been tested by ADI.

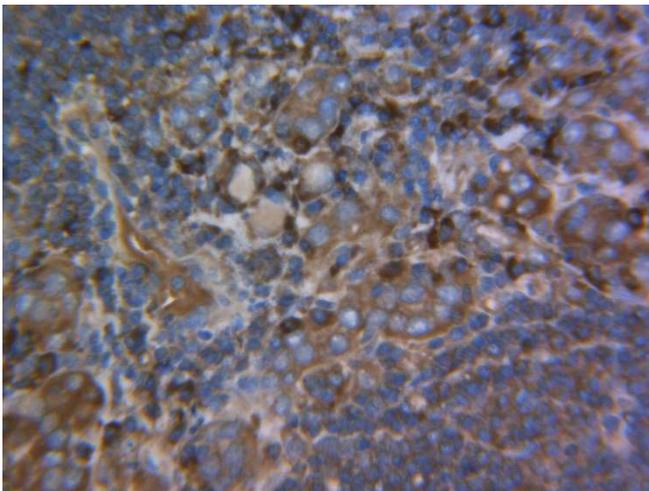
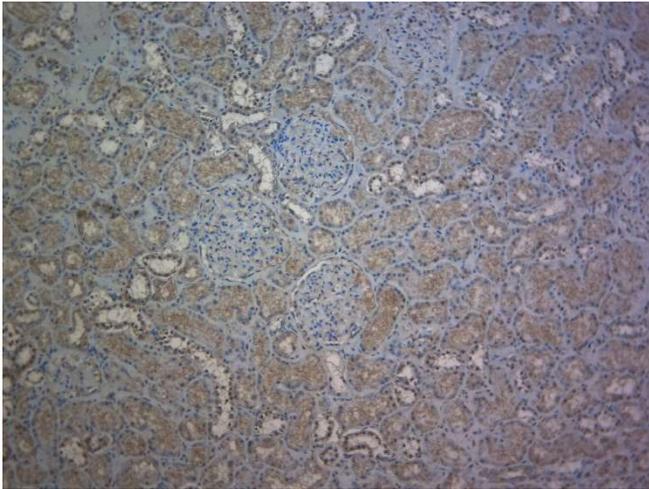
****This product is for In vitro research use only.***

Related materials available from ADI

| Catalog# | Description |
|----------|---|
| OCLN11-A | Rabbit Anti-Human Occludin antibody |
| CDH11-A | Rabbit Anti-Human Cadherin/E-Cadherin (anti-CDH1) antibody, affinity purified |
| GFAP11-A | Rabbit anti-Mouse phospho Glial fibrillary acidic protein (Ser266) antibody |
| GFAP21-A | Rabbit anti-Mouse Glial fibrillary acidic protein (GFAP) antibody |
| BRDU11-A | Mouse anti-BrdU monoclonal antibody |
| CLDN1-A | Rabbit anti-Mouse Claudin-1 (CLDN1) antibody |
| CLDN2-A | Rabbit anti-Human Claudin-2 (CLDN2) antibody |
| CLDN5-A | Rabbit anti-Mouse Claudin-5 (CLDN5) antibody |
| CLDN7-A | Rabbit anti-Human Claudin-7 (CLDN7) antibody |

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Immunohistochemistry: FFPE Human Kidney and Papillary Thyroid carcinoma slides were heated for 20 minutes at 60°C then deparaffinized. Antigen retrieval was performed for 10 minutes at 95°C in a microwave using 10 mM pH 6, sodium citrate buffer. The slide was then cooled for 20 minutes at room temperature before being blocked for 30 minutes with 2.5% normal goat serum. **TJP1P-A** was diluted to 5 µg/ml in TBST+0.1% BSA and incubated overnight at 4°C. The slides were then washed twice and incubated with 3% hydrogen peroxide for 10 minutes to quench endogenous peroxidase. The slide was washed then incubated with Goat anti-Rabbit IgG HRP polymer detection reagent for 30 minutes at room temperature. The slide was washed twice, incubated with DAB for 3 minutes, washed with distilled water, then counterstained for 1 minute with Gil's II Hematoxylin before being cover-slipped.