

For Research Use Only

# ZO-1 Polyclonal antibody

Catalog Number: 21773-1-AP

Featured Product

1582 Publications



## Basic Information

### Catalog Number:

21773-1-AP

### Concentration:

1000 ug/ml

### Source:

Rabbit

### Isotype:

IgG

### Immunogen Catalog Number:

AG16454

### GenBank Accession Number:

BC111712

### GeneID (NCBI):

7082

### UNIPROT ID:

Q07157

### Full Name:

tight junction protein 1 (zona occludens 1)

### Calculated MW:

1748 aa, 195 kDa

### Observed MW:

230 kDa

### Purification Method:

Antigen affinity purification

### Recommended Dilutions:

WB: 1:5000-1:50000

IP: 0.5-4.0 ug for 1.0-3.0 mg of total protein lysate

IHC: 1:1000-1:4000

IF-Fro: 1:50-1:500

IF/ICC: 1:100-1:2000

FC (Intra): 0.80 ug per 10<sup>6</sup> cells in a 100 µl suspension

## Applications

### Tested Applications:

WB, IHC, IF/ICC, IF-Fro, FC (Intra), IP, ELISA

### Cited Applications:

WB, IHC, IF, CoIP, RIP, ELISA

### Species Specificity:

human, mouse, rat, canine, hamster

### Cited Species:

human, mouse, rat, pig, rabbit, canine, chicken, bovine, goat

**Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (\*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0**

### Positive Controls:

**WB:** A549 cells, HEK-293 cells, NIH/3T3 cells, Caco-2 cells, HT-29 cells, HUVEC cells, HeLa cells, HepG2 cells, K-562 cells, MCF-7 cells, mouse brain tissue, rat brain tissue, Neuro-2a cells

**IP:** HEK-293 cells,

**IHC:** mouse kidney tissue,

**IF-Fro:** mouse brain tissue,

**IF/ICC:** MCF-7 cells, MDCK cells, HUVEC cells

**FC (Intra):** MCF-7 cells,

## Background Information

Tight junction (or zonula occludens) forms the continuous intercellular barrier between epithelial and endothelial cells, which is required to separate tissue spaces and regulate selective movement of solutes across the epithelium and endothelium (PMID: 20066090). ZO-1 (also known as TJP1) is a peripheral membrane phosphoprotein located on the cytoplasmic face and is expressed in tight junctions of both epithelial and endothelial cells (PMID: 3528172). It binds the transmembrane proteins occludin and the claudins linking them to cytoskeletal actin (PMID: 17418867). ZO-1 belongs to a family of multidomain proteins known as the membrane-associated guanylate kinase homologs (MAGUKs). It is a pivotal tight junction protein and may be involved in signaling mechanisms regulating cell proliferation and differentiation (PMID: 22782886).

## Notable Publications

| Author      | Pubmed ID | Journal                   | Application |
|-------------|-----------|---------------------------|-------------|
| Yuanyuan Li | 33003577  | Mar Drugs                 | WB          |
| Mingyue Liu | 30396738  | J Thorac Cardiovasc Surg  | WB          |
| Susu Lin    | 36169685  | Psychopharmacology (Berl) | IHC         |

## Storage

### Storage:

Store at -20°C. Stable for one year after shipment.

### Storage Buffer:

PBS with 0.02% sodium azide and 50% glycerol, pH7.3

Aliquoting is unnecessary for -20°C storage

For technical support and original validation data for this product please contact:

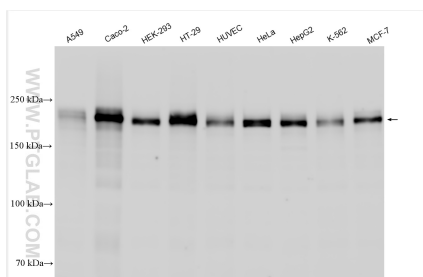
T: 4006900926

E: [Proteintech-CN@ptglab.com](mailto:Proteintech-CN@ptglab.com)

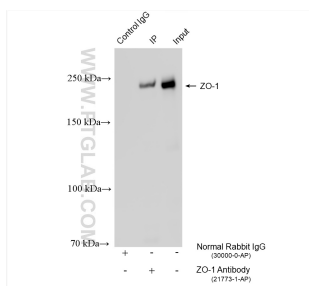
W: [ptgcn.com](http://ptgcn.com)

**This product is exclusively available under Proteintech Group brand and is not available to purchase from any other manufacturer.**

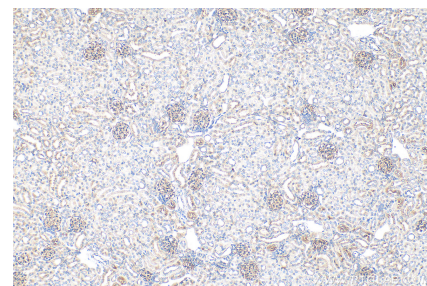
## Selected Validation Data



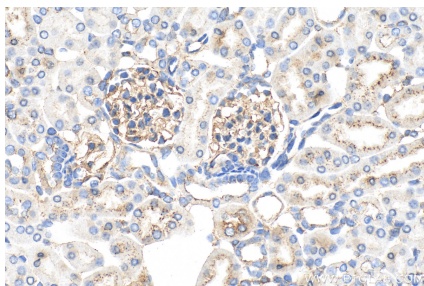
Various lysates were subjected to SDS PAGE followed by western blot with 21773-1-AP (ZO-1 antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours.



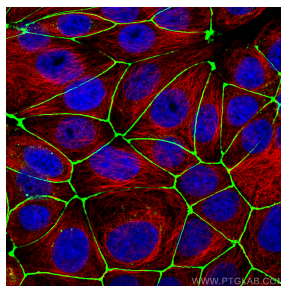
IP result of anti-ZO-1 (IP:21773-1-AP, 4ug; Detection:21773-1-AP 1:30000) with HEK-293 cells lysate 1800 ug.



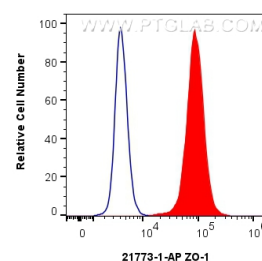
Immunohistochemical analysis of paraffin-embedded mouse kidney tissue slide using 21773-1-AP (ZO-1 antibody) at dilution of 1:2000 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



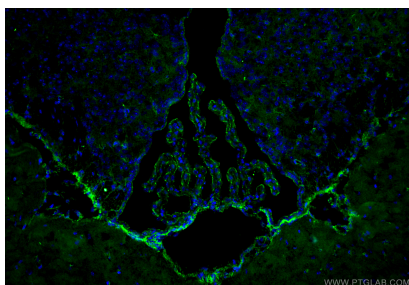
Immunohistochemical analysis of paraffin-embedded mouse kidney tissue slide using 21773-1-AP (ZO-1 antibody) at dilution of 1:2000 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunofluorescent analysis of (4% PFA) fixed MCF-7 cells using ZO-1 antibody (21773-1-AP) at dilution of 1:2000 and CoraLite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L), Alpha Tubulin antibody (66031-1-Ig, Clone: 1E4C11, red).



1x10<sup>6</sup> MCF-7 cells were intracellularly stained with 0.8 ug ZO-1 Polyclonal antibody (21773-1-AP) and CoraLite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L) (SA00013-2)(red), or 0.8 ug Rabbit IgG control Rabbit PolyAb (30000-O-AP) (blue). Cells were fixed with 4% PFA and permeabilized with Flow Cytometry Perm Buffer (PF00011-C).



Immunofluorescent analysis of (4% PFA) fixed frozen OCT-embedded mouse brain tissue using ZO-1 antibody (21773-1-AP) at dilution of 1:200 and CoraLite®488-Conjugated Goat Anti-Rabbit IgG(H+L) (SA00013-2).