

For Research Use Only

# ZO-1 Recombinant antibody

Catalog Number: 82870-7-RR



## Basic Information

**Catalog Number:**

82870-7-RR

**Size:**

100ul, Concentration: 1000 ug/ml by Nanodrop;

**Source:**

Rabbit

**Isotype:**

IgG

**Immunogen Catalog Number:**

AG33182

**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:**

Protein A purification

**CloneNo.:**

240150D7

**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/ICC 1:200-1:800

## Applications

**Tested Applications:**

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

**Species Specificity:**

human, mouse, rat, canine

**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:** HeLa cells, mouse brain tissue, HepG2 cells, Caco-2 cells, HT-29 cells, MCF-7 cells, rat brain tissue

**IP:** HEK-293 cells,

**IHC:** mouse kidney tissue,

**IF/ICC:** MCF-7 cells, U2OS cells, MDCK cells, Caco-2 cells

## Background Information

Tight junction (or zonula occludens) form 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).

## Storage

**Storage:**

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

**Storage Buffer:**

PBS with 0.02% sodium azide and 50% glycerol pH 7.3.

Aliquoting is unnecessary for -20°C storage

\*\*\* 20ul sizes contain 0.1% BSA

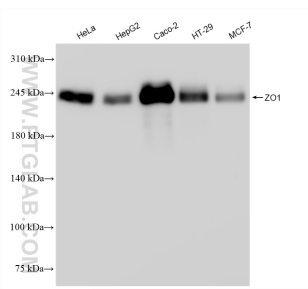
For technical support and original validation data for this product please contact:

T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)

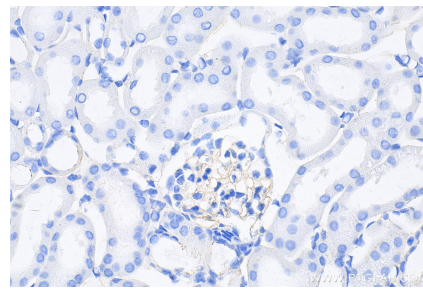
E: [proteintech@ptglab.com](mailto:proteintech@ptglab.com)  
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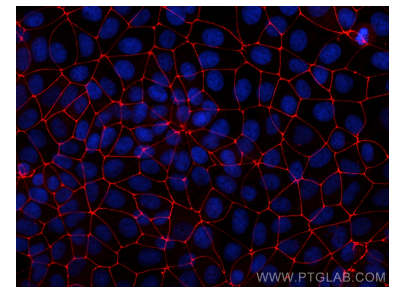
## Selected Validation Data



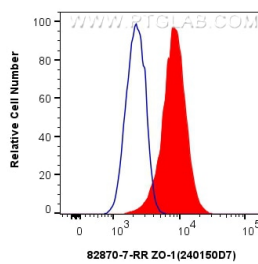
Various lysates were subjected to SDS PAGE followed by western blot with 82870-7-RR (ZO1 antibody) at dilution of 1:20000 incubated at room temperature for 1.5 hours.



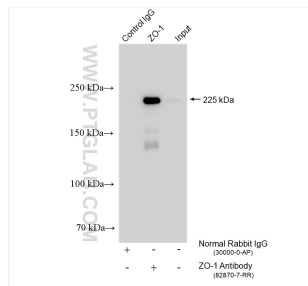
Immunohistochemical analysis of paraffin-embedded mouse kidney tissue slide using 82870-7-RR (ZO-1 antibody) at dilution of 1:2000 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



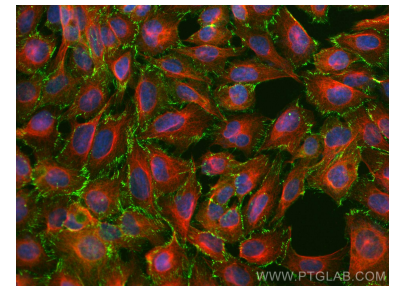
Immunofluorescent analysis of (4% PFA) fixed MCF-7 cells using ZO-1 antibody (82870-7-RR, Clone: 240150D7) at dilution of 1:400 and CoraLite® 594-Conjugated Goat Anti-Rabbit IgG(H+L) (SA00013-4).



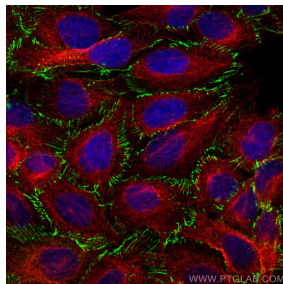
$1 \times 10^6$  MCF-7 cells were intracellularly stained with 0.25  $\mu$ g ZO-1 Recombinant antibody (82870-7-RR, Clone:240150D7) and CoraLite®488-Conjugated Goat Anti-Rabbit IgG(H+L) (SA00013-2) (red), or 0.25  $\mu$ g Rabbit IgG Isotype Control Recombinant Antibody (98136-1-RR, Clone: 240953C9) (blue). Cells were fixed with 4% PFA and permeabilized with Flow Cytometry Perm Buffer (PF00011-C).



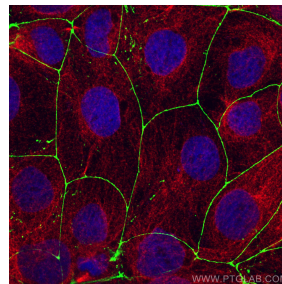
IP result of anti-ZO-1 (IP:82870-7-RR, 4 $\mu$ g; Detection:82870-7-RR 1:4000) with HEK-293 cells lysate 1610  $\mu$ g.



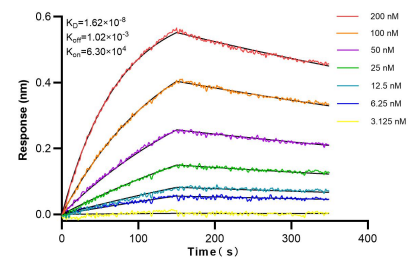
Immunofluorescent analysis of (4% PFA) fixed U2OS cells using ZO-1 antibody (82870-7-RR, Clone: 240150D7) at dilution of 1:400 and Multi-rAb CoraLite® Plus 488-Goat Anti-Rabbit Recombinant Secondary Antibody (H+L) (RGAR002).



Immunofluorescent analysis of (4% PFA) fixed U2OS cells using ZO-1 antibody (82870-7-RR, Clone: 240150D7) at dilution of 1:500 and CoraLite®488-Conjugated Goat Anti-Rabbit IgG(H+L) (SA00013-2), Alpha Tubulin antibody (66031-1-Ig, Clone: 1E4C11, red).



Immunofluorescent analysis of (4% PFA) fixed Caco-2 cells using ZO-1 antibody (82870-7-RR, Clone: 240150D7) at dilution of 1:500 and Multi-rAb CoraLite® Plus 488-Goat Anti-Rabbit Recombinant Secondary Antibody (H+L) (RGAR002), Alpha Tubulin antibody (66031-1-Ig, Clone: 1E4C11, red).



Bi-layer interferometry (BLI) kinetic assays of 82870-7-RR against Human ZO-1 were performed. The affinity constant is 16.2 nM.