Anti-ZO-1 Mouse mAb

Purified Recombinant Mouse Monoclonal Antibody

Catalog # M900002

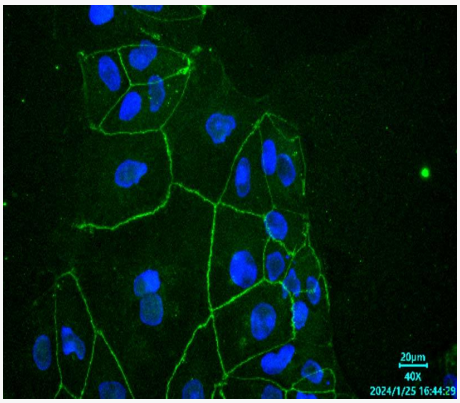
Product Information

Application	WB, IHC-P/IF (Tissue-P), IF (Cell)/ICC, ELISA
Reactivity	Human, Mouse
Dilution	WB 1:1,000~1:5,000; IHC-P 1:100~1:200; IF 1:100~1:200
Host	Mouse
Clonality	Monoclonal
Clone No.	24D02C18
Isotype	IgG
Label	Unconjugated
Immunogen	A synthesized peptide derived from human ZO-1
Format	Affinity purified monoclonal antibody supplied in PBS with 0.01% sodium azide and 50% glycerol, pH 7.3.
Storage	Shipped on wet ice. Store at -20°C. Stable for 24 months from date of receipt. Aliquoting is unnecessary for -20°C storage.
Precautions	Anti-ZO-1 Mouse mAb [24D02C18] is for research use only and not for use in diagnostic or therapeutic procedures.

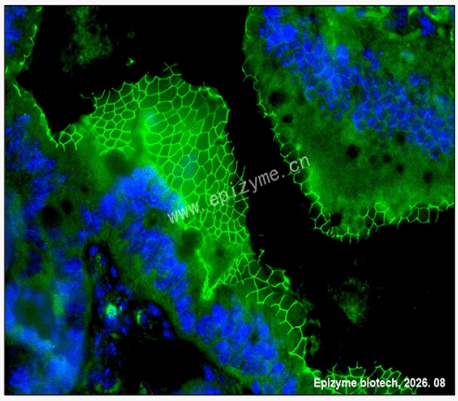
Protein Information

Synonyms	Tight junction protein 1, Tight junction protein ZO-1, Tight junction protein ZO1, TJP1, zo-1, Zo1, ZO1_HUMAN, Zona occludens 1, Zona occludens 1 protein, Zona occludens protein 1, Zonula occludens 1 protein, Zonula occludens protein 1.
Calculated MW	Calculated MW: 195 kDa; Observed MW: 260 kDa
Uniprot ID	Q07157
Gene ID	7082
Antigen Region	39-53 aa
Background	ZO-1 forms complexes with either ZO-2 or ZO-3. In addition, these proteins can also associate with claudin, occludin and F-actin, at tight junction stands, where they provide a linkage between the actin cytoskeleton and the tight junction. ZO-1 expression is significantly reduced in many breast cancer lines. ZO-2 and ZO-3 are ubiquitously expressed within epithelial tight junctions, and unlike ZO-1, which is also expressed at cell junctions of cardiac myocytes, ZO-2 is not expressed in nonepithelial tissue. ZO-1 is a protein located on a cytoplasmic membrane surface of intercellular tight junctions. ZO-1 may be involved in signal transduction at cell-cell junctions. Two transcript variants encoding distinct isoforms have been identified for the ZO-1 gene. Diseases associated with ZO-1 dysfunction include Celiac Disease and Congenital Nephrotic Syndrome.
Cellular Location	Cell membrane. Cell junction > tight junction. Movement of ZO-1 from the cytoplasm to membrane is an early event occurring concurrently with cell-cell contact.
Tissue Location	The alpha-containing isoform is found in most epithelial cell junctions. The short isoform is found both in endothelial cells and the highly specialized epithelial junctions of renal glomeruli and Sertoli cells of the seminiferous tubules.

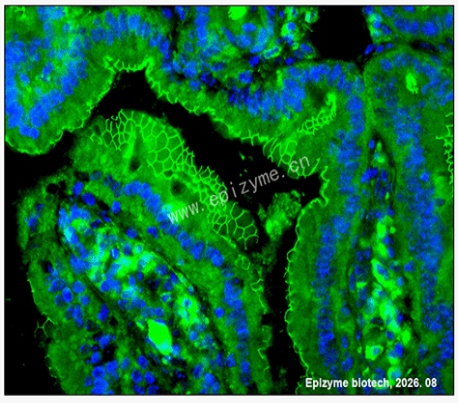
Validation Images



Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.01% Saponin permeabilized CACO-2 cells labeling Anti-ZO-1 Mouse mAb at 1:500 dilution, followed by Goat Anti-Rabbit IgG H+L secondary antibody at 1:1,000 dilution (green). The nuclear counter stain is DAPI (blue).



Immunofluorescence - Anti-ZO-1 Mouse mAb [24D02C18]
Sample: Paraformaldehyde-fixed, paraffin embedded mouse small intestine tissue
The section was pre-treated using heat mediated antigen retrieval with Sodium citrate-EDTA buffer for 30 mins.
Mouse small intestine tissue were permeabilized with 0.1% Triton X-100 for 5 mins and then blocked with 5% goat serum for 30 mins.
Primary antibody: M900002 at 1:100 dilution
Secondary antibody: Goat anti-Mouse (488) at 1:1,000 dilution (shown in green)
Nuclei were stained with DAPI (shown in blue).



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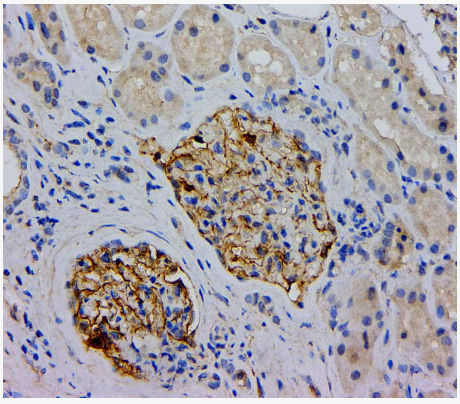
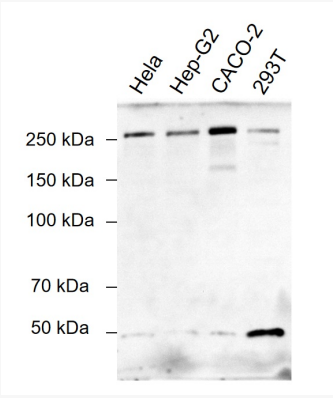


Immunohistochemical analysis of human kidney tissue labeling Anti-ZO-1 Mouse mAb at 1:100 dilution followed by a ready-to-use Goat Anti-mouse IgG H+L (HRP). Counterstained with hematoxylin.



Western-blot analysis of ZO-1 expression in cell lines of Hela, Hep-G2, CACO-2 and HEK293T . Lysates at 20 µg per lane. Anti-ZO-1 was used as the primary antibody (1:1,000) and goat anti-mouse IgG-HRP (LF101) was used as the secondary antibody (1:5,000). Chemiluminescent detection was performed using Omni-ECL™ Femto Light Chemiluminescence Kit (SQ201).