

Basic Information

Product Name	Anti-ZO-2/TJP2 Antibody	
Gene Name	TJP2	
Source	Rabbit	
Clonality	Polyclonal	
Isotype	IgG	
Species Reactivity	human, mouse, rat, monkey	
Tested Application	WB, IHC, ICC/IF, FCM	
Contents	500 ug/ml antibody with PBS, 0.02% NaN ₃ , 1 mg/ml BSA and 50% glycerol.	
Immunogen	A synthetic peptide corresponding to a sequence at C-terminus of human TJP2/ZO2, identical to the related mouse sequence.	
Concentration	500 ug/ml	
Purification	Immunogen affinity purified.	
Observed MW	150 kDa	
Dilution Ratios	Western blot (WB): 1:500-2000 Immunohistochemistry (IHC): 1:50-400 Immunocytochemistry/Immunofluorescence (ICC/IF): 1:50-400 Flow Cytometry (Fixed): 1:50-200 (Boiling the paraffin sections in 10mM citrate buffer, pH6.0, or PH8.0 EDTA repair liquid for 20 mins is required for the staining of formalin/paraffin sections.) Optimal working dilutions must be determined by end user.	

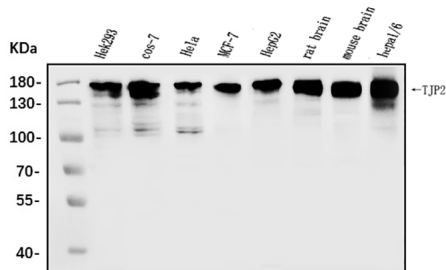
Storage

12 months from date of receipt, -20°C as supplied.

Background Information

TJP2(Tight Junction Protein 2), also known as Zona Occludens 2 or ZO2 is a protein that in humans is encoded by the TJP2 gene. Tight junction proteins(TJPs) belong to a family of membrane-associated guanylate kinase(MAGUK) homologs that are involved in the organization of epithelial and endothelial intercellular junctions. Duclos et al.(1994) mapped the TJP2 gene telomeric to the Friedreich ataxia critical region on chromosome 9q13-q21. TJP2 lies about 70 kb centromeric to the X123 gene and is transcribed in the centromere-to-telomere direction. Using in vitro assays and immunoprecipitation studies, Itoh et al.(1999) showed that the mouse Tjp1, Tjp2, and Tjp3 PDZ1 domains interacted with the C-terminal cytoplasmic domains of Cldn1 through Cldn8. In the mouse inner ear, Walsh et al.(2010) found that Tjp2 expression decreased rapidly between E16.5 and age 1 week to a level in adult mice that was approximately 50% of the level at birth(P0).

Selected Validation Data



Western blot analysis of ZO-2/TJP2 using anti-ZO-2/TJP2 antibody (A02774-1). The sample well of each lane was loaded with 30 ug of sample under reducing conditions.

Lane 1: human HEK293 whole cell lysates,

Lane 2: monkey COS-7 whole cell lysates,

Lane 3: human HELA whole cell lysates,

Lane 4: human MCF-7 whole cell lysates,

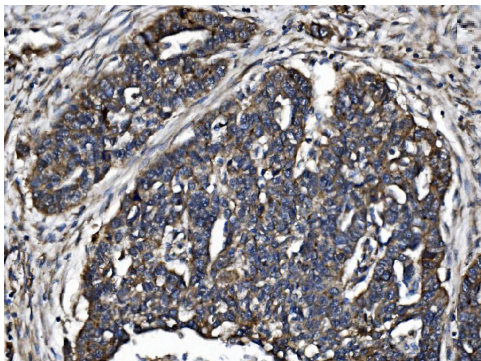
Lane 5: human HEPG2 whole cell lysates,

Lane 6: rat brain tissue lysates,

Lane 7: mouse brain tissue lysates,

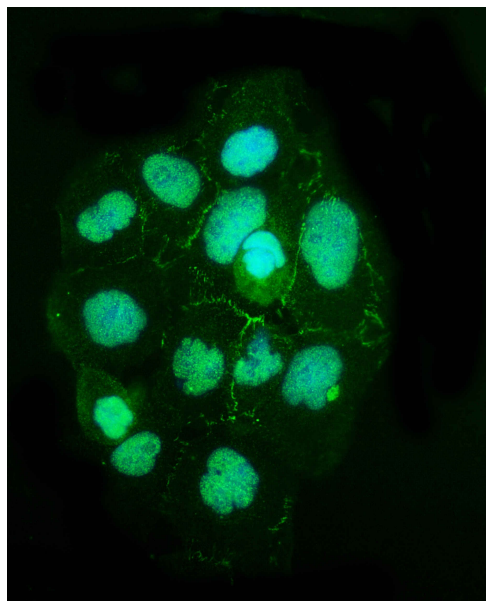
Lane 8: mouse HEPA1-6 whole cell lysates.

After electrophoresis, proteins were transferred to a membrane. Then the membrane was incubated with rabbit anti-ZO-2/TJP2 antigen affinity purified polyclonal antibody (A02774-1) at a dilution of 1:1000 and probed with a goat anti-rabbit IgG-HRP secondary antibody (Catalog # BA1054). The signal is developed using ECL Plus Western Blotting Substrate (Catalog # AR1197). A specific band was detected for ZO-2/TJP2 at approximately 150 kDa. The expected band size for ZO-2/TJP2 is at 150 kDa.

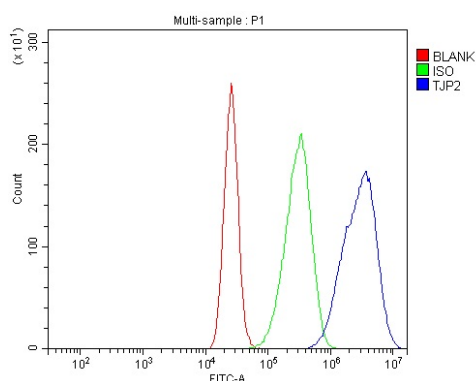


IHC analysis of ZO-2/TJP2 using anti-ZO-2/TJP2 antibody (A02774-1).

ZO-2/TJP2 was detected in a paraffin-embedded section of human ovarian serous adenocarcinoma tissue. Biotinylated goat anti-rabbit IgG was used as secondary antibody. The tissue section was incubated with rabbit anti-ZO-2/TJP2 Antibody (A02774-1) at a dilution of 1:200 and developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB (Catalog # AR1027) as the chromogen.



IF analysis of ZO-2/TJP2 using anti-ZO-2/TJP2 antibody (A02774-1). ZO-2/TJP2 was detected in an immunocytochemical section of A431 cells. The section was incubated with rabbit anti-ZO-2/TJP2 Antibody (A02774-1) at a dilution of 1:100. DyLight®488 Conjugated Goat Anti-Rabbit IgG (Green) (Catalog # BA1127) was used as secondary antibody. The section was counterstained with DAPI (Catalog # AR1176) (Blue).



Flow Cytometry analysis of Caco-2 cells using anti-ZO-2/TJP2 antibody (A02774-1).

Overlay histogram showing Caco-2 cells stained with A02774-1 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-ZO-2/TJP2 Antibody (A02774-1) at 1:100 dilution for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG at 1:100 dilution used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.