

Product datasheet

Anti-ZO1 tight junction protein antibody ab216880

★★★★★ [2 Abreviews](#) [85 References](#) [5 Images](#)

Overview

Product name	Anti-ZO1 tight junction protein antibody
Description	Rabbit polyclonal to ZO1 tight junction protein
Host species	Rabbit
Tested applications	Suitable for: WB, ICC
Species reactivity	Reacts with: Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: Wild-type HeLa, U-2 OS, WM115, A549, HeLa, PC-3, and SK-OV-3 whole cell lysates. ICC: Caco-2, MCF7 cells.
General notes	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.01% Sodium azide Constituent: PBS
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab216880 in the following tested applications.

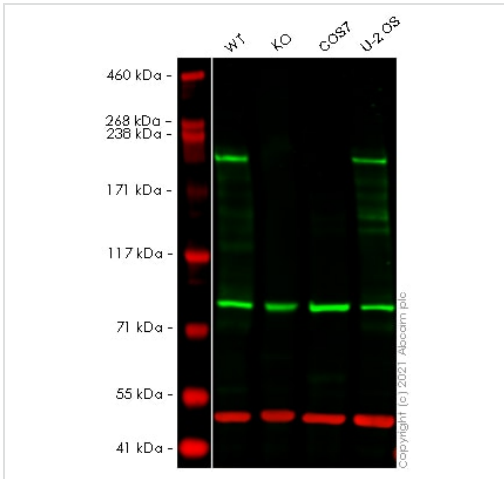
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/1000. Detects a band of approximately 195, 245 kDa (predicted molecular weight: 195 kDa). This antibody is more reactive to mouse in IHC than it is to mouse lysates in Western blot.
ICC		Use a concentration of 1 - 15 µg/ml.

Target

Function	The N-terminal may be involved in transducing a signal required for tight junction assembly, while the C-terminal may have specific properties of tight junctions. The alpha domain might be involved in stabilizing junctions.
Tissue specificity	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.
Sequence similarities	Belongs to the MAGUK family. Contains 1 guanylate kinase-like domain. Contains 3 PDZ (DHR) domains. Contains 1 SH3 domain. Contains 1 ZU5 domain.
Domain	The second PDZ domain mediates interaction with GJA12.
Post-translational modifications	Phosphorylated. Dephosphorylated by PTPRJ.
Cellular localization	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.

Images



Western blot - Anti-ZO1 tight junction protein antibody (ab216880)

All lanes : Anti-ZO1 tight junction protein antibody (ab216880) at 1/1000 dilution

Lane 1 : Wild-type HeLa cell lysate at 20 μ g

Lane 2 : TJP1 knockout HeLa cell lysate at 20 μ g

Lane 3 : COS7 cell lysate at 10 μ g

Lane 4 : U-2 OS cell lysate at 20 μ g

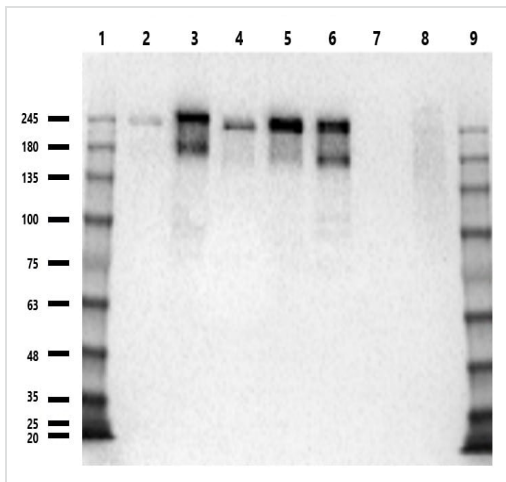
Performed under reducing conditions.

Predicted band size: 195 kDa

Observed band size: 200 kDa

Lanes 1 -4: Merged signal (red and green). Green - ab216880 observed at 200 kDa. Red - loading control **ab7291** (Mouse anti-Alpha Tubulin [DM1A]) observed at 55 kDa.

ab216880 was shown to react with ZO1 tight junction protein in wild-type HeLa cells in Western blot with loss of signal observed in TJP1 knockout cell line **ab264897** (TJP1 knockout cell lysate **ab257744**). Wild-type HeLa and TJP1 knockout cell lysates were subjected to SDS-PAGE. Membranes were blocked in 3 % milk in TBS-T (0.1 % Tween[®]) before incubation with ab216880 and **ab7291** (Mouse anti-Alpha Tubulin [DM1A]) overnight at 4 °C at a 1 in 1000 dilution and a 1 in 20000 dilution respectively. Blots were incubated with Goat anti-Rabbit IgG H&L (IRDye[®] 800CW) preabsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye[®] 680RD) preabsorbed (**ab216776**) secondary antibodies at 1 in 20000 dilution for 1 h at room temperature before imaging.



Western blot - Anti-ZO1 tight junction protein antibody (ab216880)

All lanes : Anti-ZO1 tight junction protein antibody (ab216880) at 1 $\mu\text{g/ml}$

Lanes 1 & 9 : Protein Standard at 10 μl

Lane 2 : WM115 (human melanoma cell line) whole cell lysate at 10 μg

Lane 3 : A549 (human lung carcinoma cell line) whole cell lysate at 10 μg

Lane 4 : HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell lysate at 10 μg

Lane 5 : PC-3 (human prostate adenocarcinoma cell line) whole cell lysate at 10 μg

Lane 6 : SK-OV-3 (human ovarian cancer cell line) whole cell lysate at 10 μg

Lane 7 : Mouse testis tissue lysate at 10 μg

Lane 8 : Rat testis tissue lysate at 10 μg

Secondary

All lanes : Goat anti Rabbit IgG H&L (HRP) at 1/70000 dilution

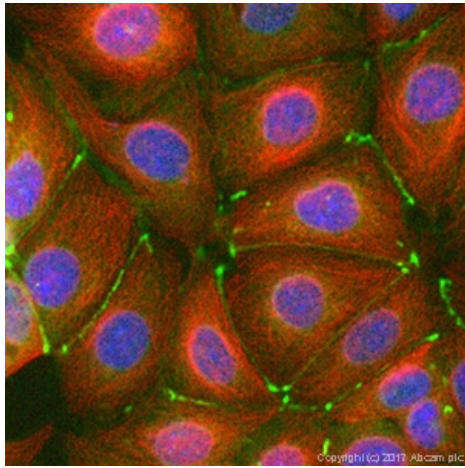
Performed under reducing conditions.

Predicted band size: 195 kDa

Observed band size: 195,245 kDa

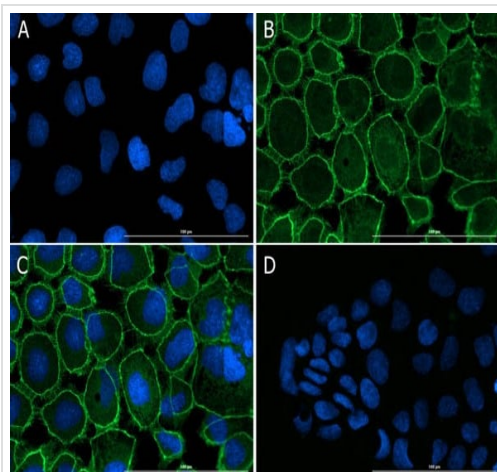
Exposure time: 5 seconds

Lysates reduced with beta-Mercaptoethanol and proteins separated by SDS-PAGE. Transferred to 0.2 μm nitrocellulose membrane at 20V for 7 minutes. Blocked with 5% BLOTTO for 1 hour at room temperature. Incubated with primary overnight at 2-8°C, followed by secondary for 30 minutes at room temperature.



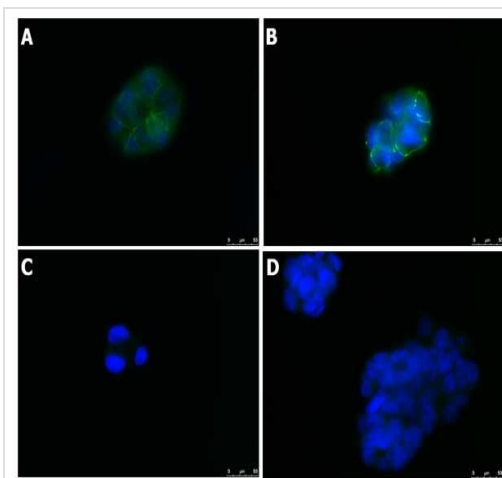
Immunocytochemistry - Anti-ZO1 tight junction protein antibody (ab216880)

ab216880 stained in MCF7 (Human breast adenocarcinoma cell line) cells. Cells were fixed with 100% methanol (5 minutes) at room temperature and incubated with PBS containing 10% goat serum, 0.3 M glycine, 1% BSA and 0.1% tween for 1 hour at room temperature to permeabilize the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody ab216880 at 1 µg/ml and **ab7291** (Mouse monoclonal [DM1A] to alpha Tubulin - Loading Control) at 1/1000 dilution overnight at +4°C. The secondary antibodies were **ab150120** (pseudo-colored red) and **ab150081** (colored green) used at 1 µg/ml for 1 hour at room temperature. DAPI was used to stain the cell nuclei (colored blue) at a concentration of 1.43 µM for 1 hour at room temperature



Immunocytochemistry - Anti-ZO1 tight junction protein antibody (ab216880)

Immunocytochemistry analysis of 4% paraformaldehyde fixed Caco-2 (human colorectal adenocarcinoma cell line) cells labeling ZO1 tight junction protein with ab216880 at 15 µg/mL. Cells permeabilized with 0.3% Triton X-100 and incubated with primary antibody overnight at 2-8°C. Donkey Anti-Rabbit IgG DyLight™ 488 Conjugated (Preadsorbed) was used as the secondary antibody at 5 µg/mL for 1 hour at room temperature. Staining: (A) DAPI. (B) ab216880 with secondary. (C) Merge A-B. (D) Secondary Only.



Immunocytochemistry - Anti-ZO1 tight junction protein antibody (ab216880)

Immunofluorescent analysis of 0.5% PFA-fixed (A and C) and 0.5% methanol-fixed (B and D) Caco-2 (human colorectal adenocarcinoma cell line) cells labeling ZO1 tight junction protein with ab216880 at 10 µg/ml (green).

The nuclear counter stain is DAPI (blue).

Secondary antibody only control: C and D.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors