abcam

Product datasheet

Anti-ZO1 tight junction protein antibody ab96587

4 Abreviews 152 References 6 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:** ICC/IF, WB **Unsuitable for:** IHC-P
Species reactivity	**Reacts with:** Mouse, Human
Immunogen	Recombinant protein fragment corresponding to a region within amino acids 1 - 266 of Human ZO1 tight junction protein.
Positive control	WB: HEK-293T, HeLa, Neuro-2a, C8-D30, NIH/3T3 and C2C12 cell lysate, mouse testis tissue lysate. ICC/IF: NTERA-2 cl.D1 [NT2/D1] cells and H661 xenograft tissue.
General notes	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. 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

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. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.00 Preservative: 0.025% Proclin 300 Constituents: 79% PBS, 20% Glycerol (glycerin, glycerine)
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab96587 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
ICC/IF		1/100 - 1/1000. Fix cells in ice-cold MeOH
WB	★★★★☆ (2)	1/500 - 1/3000. Predicted molecular weight: 187 kDa. 5% gel. Blocking condition: 5% non-fat milk in TBST, RT, 60min. Primary antibody incubation: 4°C overnight. Molecular weight shift may be caused by post-translation modification, there are multiple phosphorylation sites on ZO-1. It

Application notes Is unsuitable for IHC-P.

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.

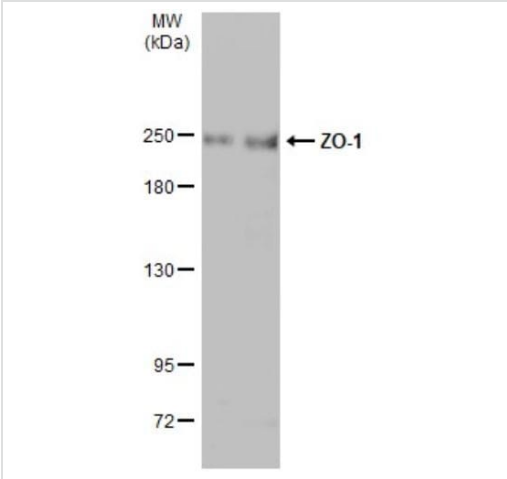
Sequence similarities Belongs to the MAGUK family.
Contains 1 guanylate kinase-like domain.
Contains 3 PDZ (DHR) domains.
Contains 1 SH3 domain.
Contains 1 ZU5 domain.

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 (ab96587)

All lanes : Anti-ZO1 tight junction protein antibody (ab96587) at 1/1000 dilution

Lane 1 : HEK-293T (human epithelial cell line from embryonic kidney transformed with large T antigen) whole cell lysate
Lane 2 : HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell lysate

Lysates/proteins at 30 µg per lane.

Secondary
All lanes : HRP-conjugated anti-rabbit IgG antibody

Predicted band size: 187 kDa

5% gel.

Running condition: 80V, 15min; 140V, 40min.

Transfer condition:Semi-dry, 18 V, 60min (Nitrocellulose membrane)

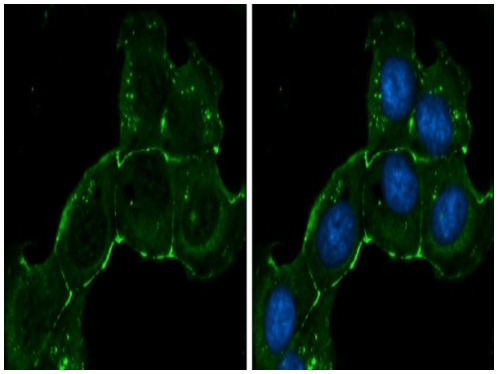
Blocking condition: 5% non-fat milk in TBST, RT, 60min.

Primary antibody incubation: 4°C overnight.

Secondary antibody incubation: Room temperature for 1 hour.

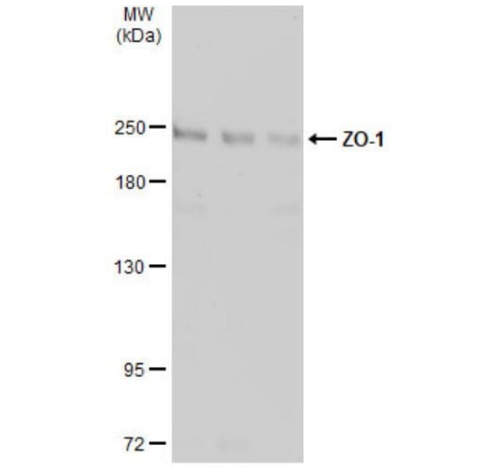
Washing condition: 5 ml TBST, 4 x 5min.

ECL detection.



Immunocytochemistry/ Immunofluorescence - Anti-ZO1 tight junction protein antibody (ab96587)

Immunofluorescence analysis of ice-cold methanol-fixed (5 min) NTERA-2 cl.D1 [NT2/D1] (human malignant pluripotent embryonic carcinoma cell line) cells labeling ZO1 tight junction protein at cell membrane (green) with ab96587 at 1/200 dilution. Blue: Hoechst 33342 staining.



Western blot - Anti-ZO1 tight junction protein antibody (ab96587)

All lanes : Anti-ZO1 tight junction protein antibody (ab96587) at 1/500 dilution

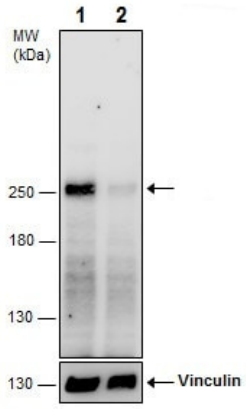
Lane 1 : Neuro-2a (mouse neuroblastoma cell line) whole cell lysate
Lane 2 : C8-D30 (mouse astrocyte type III cerebellum cell line) whole cell lysate
Lane 3 : NIH/3T3 (mouse embryo fibroblast cell line) whole cell lysate

Lysates/proteins at 30 µg per lane.

Secondary
All lanes : HRP-conjugated anti-rabbit IgG antibody

Predicted band size: 187 kDa

5% SDS-PAGE



Western blot - Anti-ZO1 tight junction protein antibody (ab96587)

All lanes : Anti-ZO1 tight junction protein antibody (ab96587) at 1/1000 dilution

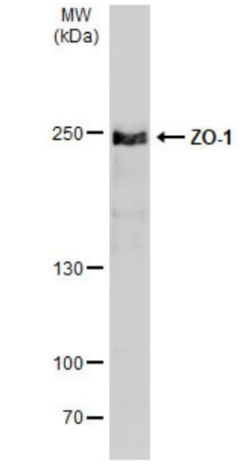
Lane 1 : Non-transfected HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell extract
Lane 2 : ZO1 tight junction protein shRNA-transfected HeLa whole cell extract

Lysates/proteins at 30 µg per lane.

Secondary
All lanes : HRP-conjugated anti-rabbit IgG

Predicted band size: 187 kDa

5% SDS-PAGE



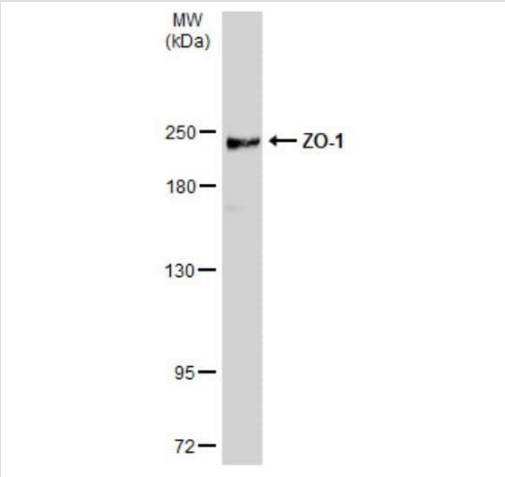
Western blot - Anti-ZO1 tight junction protein antibody (ab96587)

Anti-ZO1 tight junction protein antibody (ab96587) at 1/500 dilution + Mouse testis tissue lysate at 50 µg

Secondary
HRP-conjugated anti-rabbit IgG antibody

Predicted band size: 187 kDa

5% SDS-PAGE



Western blot - Anti-ZO1 tight junction protein antibody (ab96587)

Anti-ZO1 tight junction protein antibody (ab96587) at 1/500 dilution
+ C2C12 (mouse myoblast cell line) whole cell lysate at 30 µg

Secondary

HRP-conjugated anti-rabbit IgG antibody

Predicted band size: 187 kDa

5% SDS-PAGE

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