abcam

ab221547

Anti-ZO1 tight junction protein antibody [EPR19945-296]

Anti-ZO1 tight junction protein antibody [EPR19945-296] (ab221547) is a rabbit monoclonal antibody detecting ZO1 tight junction protein in **Flow Cytometry (Intra), IHC-P, ICC/IF**. Suitable for **Human, Mouse, Rat**.

- Biophysical QC for unrivalled batch-batch consistency
- Over 70 publications

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR19945-296
Purification technique	Affinity purification Protein A
Concentration	0.656 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

WB

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/100
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-Fr

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/60
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-P

Tested

Species	Mouse
Dilution info	1/500
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Rat
Dilution info	1/500
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Human
Dilution info	1/500
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Target data

See full target information TJP1

Function	TJP1, TJP2, and TJP3 are closely related scaffolding proteins that link tight junction (TJ) transmembrane proteins such as claudins, junctional adhesion molecules, and occludin to the actin cytoskeleton (PubMed:7798316, PubMed:9792688). Forms a multistranded TJP1/ZO1 condensate which elongates to form a tight junction belt, the belt is anchored at the apical cell membrane via interaction with PATJ (By similarity). The tight junction acts to limit movement of substances through the

paracellular space and as a boundary between the compositionally distinct apical and basolateral plasma membrane domains of epithelial and endothelial cells. Necessary for lumenogenesis, and particularly efficient epithelial polarization and barrier formation (By similarity). Plays a role in the regulation of cell migration by targeting CDC42BPB to the leading edge of migrating cells (PubMed:21240187). Plays an important role in podosome formation and associated function, thus regulating cell adhesion and matrix remodeling (PubMed:20930113). With TJP2 and TJP3, participates in the junctional retention and stability of the transcription factor DBPA, but is not involved in its shuttling to the nucleus (By similarity). May play a role in mediating cell morphology changes during ameloblast differentiation via its role in tight junctions (By similarity).

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

Product Specifications
Anti-ZO1 tight junction protein antibody [EPR19945-296] (ab221547) was developed by Abcam using patented rabbit monoclonal antibody technology and is validated for use in Flow Cyt (Intra), ICC/IF, IHC-P in human, mouse, rat samples.
Anti-ZO1 tight junction protein antibody [EPR19945-296] (ab221547) specifically detects ZO1 tight junction protein (UniProt ID: Q07157; Molecular weight: 195kDa) and is sold in a convenient trial size to enable initial testing (20 µL) and larger sizes for subsequent scaling up experiments (100 µL and 1 mL).

Quality and Validation
Abcam's high quality manufacturing and validation processes ensure Anti-ZO1 tight junction protein antibody [EPR19945-296] (ab221547) has high sensitivity and specificity alongside high lot-to-lot consistency and reproducibility.
Anti-ZO1 tight junction protein antibody [EPR19945-296] (ab221547) has been cited over 75 times in peer reviewed journals and is trusted by the scientific community.
Anti-ZO1 tight junction protein antibody [EPR19945-296] (ab221547) has 6 independent reviews from customers.

Related Products

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

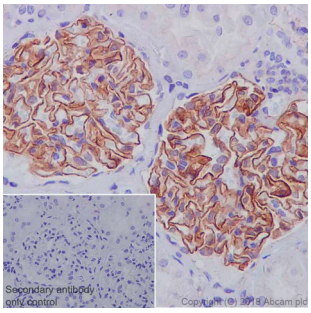
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

7 product images

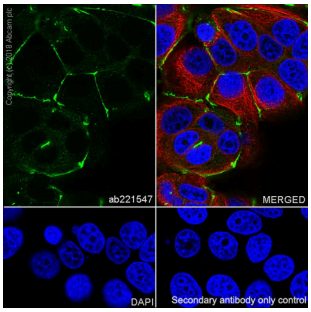


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ZO1 tight junction protein antibody [EPR19945-296] (ab221547)

ZO1 tight junction protein Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-ZO1 tight junction protein antibody

Immunohistochemical analysis of paraffin-embedded human kidney tissue labeling ZO1 tight junction protein with ab221547 at 1/500 dilution followed by Goat Anti-Rabbit IgG H&L (HRP) ready to use. Membranous and cytoplasmic in vascular endothelial cells and glomerular of human kidney (PMID: 18618131) is observed. Counter stained with hematoxylin.
Secondary antibody only control: Used PBS instead of primary antibody secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) ready to use.

Heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer pH 9.0).

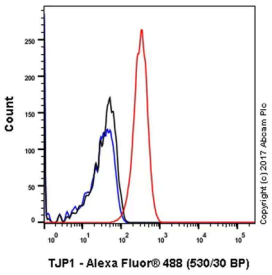


Immunocytochemistry/ Immunofluorescence - Anti-ZO1 tight junction protein antibody [EPR19945-296] (ab221547)

ZO1 tight junction protein Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-ZO1 tight junction protein antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed 0.1% Triton X-100 permeabilized MCF7 (human breast adenocarcinoma cell line) cells labeling ZO1 tight junction protein with ab221547 at 1/100 dilution followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing membranous staining in MCF7 cell line is observed. The nuclear counter stain is DAPI (blue). Tubulin is detected with Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) (ab195889) (red).

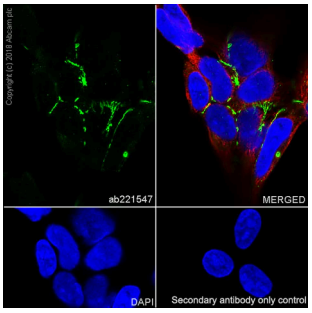
Secondary antibody only control: Used PBS instead of primary antibody followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution.



Flow Cytometry (Intracellular) - Anti-ZO1 tight junction protein antibody [EPR19945-296] (ab221547)

ZO1 tight junction protein Flow Cytometry (Intracellular) staining using rabbit Anti-ZO1 tight junction protein antibody

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed, 90% methanol-permeabilized MCF7 (human breast adenocarcinoma cell line) cells labeling ZO1 tight junction protein with ab221547 at 1/60 dilution (red) compared with an Isotype control details (ab172730) (black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (blue). Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077), at 1/2000 dilution was used as the secondary antibody.

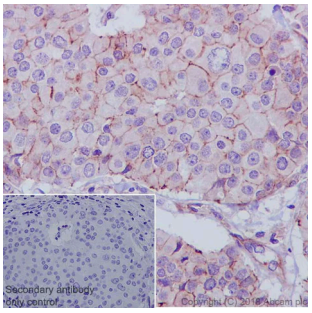


Immunocytochemistry/ Immunofluorescence - Anti-ZO1 tight junction protein antibody [EPR19945-296] (ab221547)

ZO1 tight junction protein Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-ZO1 tight junction protein antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed 0.1% Triton X-100 permeabilized HEK-293 (human epithelial cell line from embryonic kidney) cells labeling ZO1 tight junction protein with ab221547 at 1/100 dilution followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing membranous staining in HEK-293 cell line. The nuclear counter stain is DAPI (blue). Tubulin is detected with Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) (ab195889) (red).

Secondary antibody only control: Used PBS instead of primary antibody followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution.

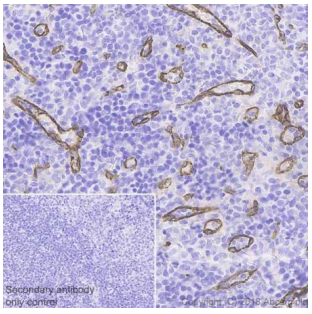


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ZO1 tight junction protein antibody [EPR19945-296] (ab221547)

ZO1 tight junction protein Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-ZO1 tight junction protein antibody

Immunohistochemical analysis of paraffin-embedded human breast cancer tissue labeling ZO1 tight junction protein with ab221547 at 1/500 dilution followed by Goat Anti-Rabbit IgG H&L (HRP) ready to use. Membranous and cytoplasmic in breast cancer (PMID: 9846967) is observed. Counter stained with hematoxylin.
Secondary antibody only control: Used PBS instead of primary antibody secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) ready to use.

Heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer pH 9.0).

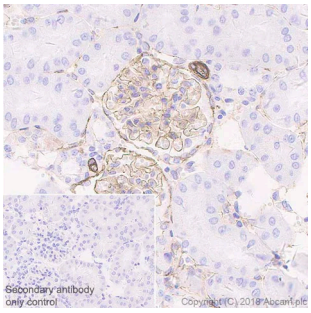


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ZO1 tight junction protein antibody [EPR19945-296] (ab221547)

ZO1 tight junction protein Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-ZO1 tight junction protein antibody

Immunohistochemical analysis of paraffin-embedded rat spleen tissue labeling ZO1 tight junction protein with ab221547 at 1/1000 dilution followed by Goat Anti-Rabbit IgG H&L (HRP) ready to use. Membranous and cytoplasmic staining in endothelial cells of rat spleen (PMID: 17585317) is observed. Counter stained with hematoxylin.
Secondary antibody only control: Used PBS instead of primary antibody secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) ready to use.

Heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer pH 9.0).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ZO1 tight junction protein antibody [EPR19945-296] (ab221547)

ZO1 tight junction protein Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-ZO1 tight junction protein antibody

Immunohistochemical analysis of paraffin-embedded mouse kidney tissue labeling ZO1 tight junction protein with ab221547 at 1/1000 dilution followed by Goat Anti-Rabbit IgG H&L (HRP) ready to use. Membranous and cytoplasmic in glomerular of mouse kidney (PMID:17585317; PMID: 18618131) is observed. Counter stained with hematoxylin.
Secondary antibody only control: Used PBS instead of primary antibody secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) ready to use.

Heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer pH 9.0).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.