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Goat Anti-ZO-1 Antibody

Peptide-affinity purified goat antibody
Catalog # AF2206a

Specification

Goat Anti-ZO-1 Antibody - Product Information

Application	**IF, Pep-ELISA**
Primary Accession	Q07157
Other Accession	NP_783297, 7082
Reactivity	**Human**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**100ug/200ul**
Isotype	**IgG**
Calculated MW	**195459**

Goat Anti-ZO-1 Antibody - Additional Information

Gene ID 7082

Other Names
Tight junction protein ZO-1, Tight junction protein 1, Zona occludens protein 1, Zonula occludens protein 1, TJP1, ZO1

Dilution
IF~~1:50~200
Pep-ELISA~~N/A

Format
0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Goat Anti-ZO-1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-ZO-1 Antibody - Protein Information

Name TJP1 (HGNC:11827)

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).

Cellular Location
Cell membrane; Peripheral membrane protein; Cytoplasmic side. Cell junction, tight junction. Cell junction. Cell junction, gap junction. Cell projection, podosome. Note=Moves from the cytoplasm to the cell membrane concurrently with cell-cell contact (PubMed:7798316). Forms a condensed tight junction-linked belt of protein during junction formation which becomes anchored to the apical cell membrane via interaction with PATJ (By similarity). At podosomal sites, is predominantly localized in the ring structure surrounding the actin core (PubMed:20930113). Colocalizes with SPEF1 at sites of cell- cell contact in intestinal epithelial cells (PubMed:31473225) {ECO:0000250|UniProtKB:O97758, ECO:0000269|PubMed:20930113, ECO:0000269|PubMed:31473225, ECO:0000269|PubMed:7798316}

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

Goat Anti-ZO-1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Goat Anti-ZO-1 Antibody - Images

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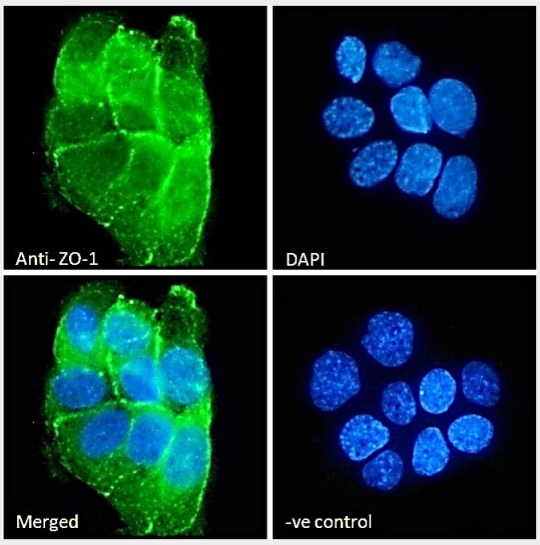
AF2206a (0.3 µg/ml) staining of Human Cerebral Cortex lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.



EB09206 Immunofluorescence analysis of paraformaldehyde fixed A431 cells, permeabilized with 0.15% Triton. Primary incubation 1hr (10ug/ml) followed by Alexa Fluor 488 secondary antibody (2ug/ml), showingcellular junction staining. The nuclear stain is DA

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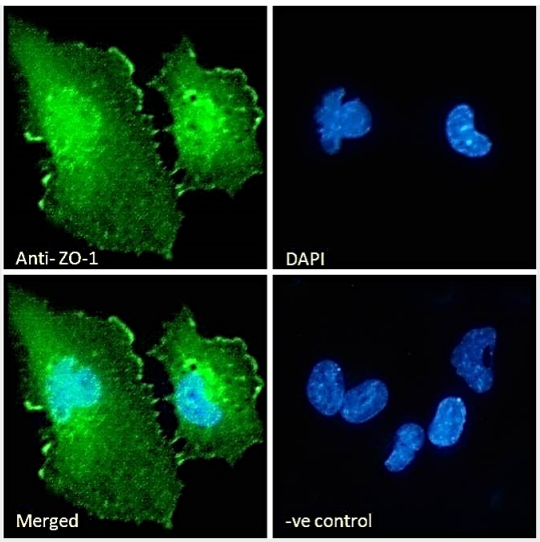

EB09206 Immunofluorescence analysis of paraformaldehyde fixed U251 cells, permeabilized with 0.15% Triton. Primary incubation 1hr (10ug/ml) followed by Alexa Fluor 488 secondary antibody (2ug/ml), showing membrane, cytoplasmic and nuclear staining. The nu

Goat Anti-ZO-1 Antibody - Background

This gene encodes a protein located on a cytoplasmic membrane surface of intercellular tight junctions. The encoded protein may be involved in signal transduction at cell-cell junctions. Two transcript variants encoding distinct isoforms have been identified for this gene.

Goat Anti-ZO-1 Antibody - References

Diesel exhaust particles modulate vascular endothelial cell permeability: implication of ZO-1 expression. Li R, et al. Toxicol Lett, 2010 Sep 1. PMID 20576493.
ZO-1 is involved in trophoblastic cell differentiation in human placenta. Pidoux G, et al. Am J Physiol Cell Physiol, 2010 Jun. PMID 20200207.
Insights into regulated ligand binding sites from the structure of ZO-1 Src homology 3-guanylate kinase module. Lye MF, et al. J Biol Chem, 2010 Apr 30. PMID 20200156.
Hypercholesterolaemic serum increases the permeability of endothelial cells through zonula occludens-1 with phosphatidylinositol 3-kinase signaling pathway. Bian C, et al. J Biomed Biotechnol, 2009. PMID 20150971.
Dislocation of Rab13 and vasodilator-stimulated phosphoprotein in inactive colon epithelium in patients with Crohn's disease. Ohira M, et al. Int J Mol Med, 2009 Dec. PMID 19885626.