

Product datasheet for **AP26408PU-N**

TJP1 (alpha minus) Guinea Pig Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	IF, IHC, WB
Recommended Dilution:	Immunohistochemistry on Frozen Sections. Immunohistochemistry on Paraffin Sections. Immunofluorescence. Western blot. The typical starting working dilution is 1/50.
Reactivity:	Canine, Human, Mouse, Rat
Host:	Guinea Pig
Isotype:	Ig
Clonality:	Polyclonal
Immunogen:	Human peptide antigen corresponding to ten residues at the splice junction.
Specificity:	The antibody recognizes specifically ZO-1 alpha-minus.
Formulation:	PBS State: Purified State: Liquid 0.2 µm filtered Ig fraction Stabilizer: 0.1% BSA Preservative: 0.02% Sodium Azide
Concentration:	lot specific
Purification:	Protein A Chromatography
Conjugation:	Unconjugated
Storage:	Store undiluted at 2-8°C.
Stability:	Shelf life: one year from despatch.
Gene Name:	tight junction protein 1
Database Link:	Entrez Gene 7082 Human Q07157



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Background:

Zona occludens 1 (ZO-1) is an ~220 kDa tight junction protein belonging to the membrane-associated guanylate kinase (MAGUK) family. Members of this family are involved in epithelial and endothelial intercellular junctions. They each contain at least one PSD95/Dlg/ZO-1 (PDZ) domain, a Src homology 3 (SH3) domain, and an enzymatically inactive guanylate kinase domain. PDZ domains are 90-amino acid protein-protein binding domains that recognize at least a 3-residue peptide motif in the COOH termini of their binding partners. PDZ domain-containing proteins, like ZO-1, typically act as scaffolding proteins that organize membrane receptors and cytosolic proteins into multimeric signaling complexes often at the sites of cell-cell contact. The effectiveness and stability of the epithelial barrier depends on a complex of proteins composing different intercellular junctions, which include tight junctions, adherens junctions, and desmosomes.

ZO-1 is a peripheral membrane protein bound on the cytoplasmic surface of junctional contacts and is expressed in all tight junctions regardless of their properties. ZO-1 immunoprecipitates with its family member ZO-2. ZO-1 was shown to undergo tyrosine phosphorylation during tight junction formation and remodeling.

Two different isoforms of ZO-1, alpha-minus and alpha-plus, have been described, which result from alternative splicing of an mRNA encoded by a single gene. The ZO-1 alpha-plus contains an 80 amino acids motif called alpha which is not present in ZO-1 alpha-minus. The alpha-containing isoform is found in most epithelial cell junctions. The short isoform (ZO-1 alpha-minus) is found both in endothelial cells and the highly specialized epithelial junctions of renal glomeruli and Sertoli cells of the seminiferous tubules. This difference in distribution provides molecular distinction among tight junctions.

Synonyms:

Zo1, Tjp1