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TJP1 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP21071a

Product Information

Application	WB, E
Primary Accession	Q07157
Reactivity	Human, Rat, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB51788
Calculated MW	195459

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
Target/Specificity	This TJP1 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 1328-1362 amino acids from the C-terminal region of human TJP1.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	TJP1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

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

Background

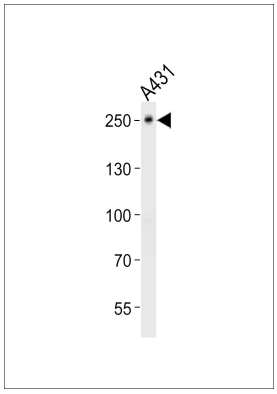
The N-terminal may be involved in transducing a signal required for tight junction assembly, while the C-terminal may have specific properties of tight junctions. The alpha domain might be involved in stabilizing junctions. Plays a role in the regulation of cell migration by targeting CDC42BPB to the leading edge of migrating cells.

References

Willott E.,et al.Proc. Natl. Acad. Sci. U.S.A. 90:7834-7838(1993).
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Zody M.C.,et al.Nature 440:671-675(2006).
Cohen C.J.,et al.Proc. Natl. Acad. Sci. U.S.A. 98:15191-15196(2001).
D'Atri F.,et al.J. Biol. Chem. 277:27757-27764(2002).

Images

Western blot analysis of lysate from A431 cell line, using TJP1 Antibody (Cterm)(Cat. #AP21071a). AP21071a was diluted at 1:1000. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody. Lysate at 20ug.



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