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PATJ Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP54746

Product Information

Application	IHC-P, IHC-F, IF, ICC, E
Primary Accession	Q8NI35
Reactivity	Rat, Dog, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	196368
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human PATJ
Epitope Specificity	1001-1200/1801
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Membrane. Cell junction; tight junction. Apical cell membrane. Note: Localized in the paranodal region of myelinating Schwann cells. Membrane-associated. Localizes to tight junctions in epithelial cells. Also found at the apical plasma membrane.
SIMILARITY	Contains 1 L27 domain. Contains 10 PDZ (DHR) domains.
SUBUNIT	Interacts with ASIC3, KCNJ10, KCNJ15, GRIN2A, GRIN2B, GRIN2C, GRIN2D, NLGN2, MPP7, HTR2A and SLC6A4 (By similarity). Forms a ternary complex with MPP5, CRB1 and CRB3. Interacts with TJP3/ZO-3 and CLDN1/claudin-1. Component of a complex whose core is composed of ARHGAP17, AMOT, MPP5/PALS1, INADL/PATJ and PARD3/PAR3. Directly interacts with HTR4 (By similarity). Interacts (via PDZ domain 8) with WWC1 (via the ADDV motif).
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	The membranes of myelinating Schwann cells are joined by tight, gap and adherens junctions, all of which are found in regions of noncompact myelin: the paranodal loops, incisures of Schmidt-Lanterman and mesaxons. Tight junctions help establish polarity in mammalian epithelia by forming a physical barrier that separates apical and basolateral membranes. Pals-associated tight junction protein (PATJ), the human homolog of Drosophila Discs Lost, is differentially localized in myelinating Schwann cells. PATJ associates with Claudin-1, CRB1 (a transmembrane protein that plays a role in epithelial cell polarity and photoreceptor development), and Pals1 (a Lin-7 associated protein). The PATJ/Pals1/CRB1 complex can form a tripartite tight junction in epithelial cells crucial to their integrity.

Additional Information

Gene ID	10207

Other Names	InaD-like protein, Inadl protein, hINADL, Channel-interacting PDZ domain-containing protein, Pals1-associated tight junction protein, Protein associated to tight junctions, PATJ {ECO:0000303|PubMed:22006950, ECO:0000312|HGNC:HGNC:28881}
Target/Specificity	Expressed in bladder, testis, ovary, small intestine, colon, heart, skeletal muscle, pancreas and cerebellum in the brain.
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,ICC=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Format	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	PATJ {ECO:0000303|PubMed:22006950, ECO:0000312|HGNC:HGNC:28881}
Function	Scaffolding protein that facilitates the localization of proteins to the cell membrane (PubMed:11927608, PubMed:16678097, PubMed:22006950). Required for the correct formation of tight junctions and epithelial apico-basal polarity (PubMed:11927608, PubMed:16678097). Acts (via its L27 domain) as an apical connector and elongation factor for multistranded TJP1/ZO1 condensates that form a tight junction belt, thereby required for the formation of the tight junction-mediated cell barrier (By similarity). Positively regulates epithelial cell microtubule elongation and cell migration, possibly via facilitating localization of PRKCI/aPKC and PAR3D/PAR3 at the leading edge of migrating cells (By similarity). Plays a role in the correct reorientation of the microtubule-organizing center during epithelial migration (By similarity). May regulate the surface expression and/or function of ASIC3 in sensory neurons (By similarity). May recruit ARHGEF18 to apical cell-cell boundaries (PubMed:22006950).
Cellular Location	Cell junction, tight junction. Apical cell membrane; Peripheral membrane protein. Cytoplasm, perinuclear region. Note=Localizes to the apical region at the start of epithelial cell polarization then locates to tight junctions as polarization is completed (PubMed:11964389). Localizes to the most apical strand of TJP1/ZO1 condensates during junctional condensation elongation (By similarity). Localized in the paranodal region of myelinating Schwann cells (By similarity). Localized to the leading edge of the actin cortex of migrating epithelia cells (By similarity). {ECO:0000250|UniProtKB:E2QYC9, ECO:0000250|UniProtKB:Q63ZW7}
Tissue Location	Expressed in renal tubules (at protein level) (PubMed:19755384). Expressed in bladder, testis, ovary, small intestine, colon, heart, skeletal muscle, pancreas and cerebellum in the brain.