10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

MPP5 Rabbit pAb

Catalog # AP98111

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	Q8N3R9
Other Accession	Q8N3R9
Reactivity	Human
Predicted	Rat, Pig, Mouse, Rabbit, Chicken, Dog, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	77294
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human MPP5
Epitope Specificity	201-300/675
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the MAGUK family. Contains 1 guanylate kinase-like domain. Contains 2 L27 domains. Contains 1 PDZ (DHR) domain. Contains 1 SH3 domain.
SUBUNIT	Interacts with CRB3, LIN7C and MPDZ. Interacts with INADL, PARD6B, SC6A1 and EZR (By similarity). Forms a complex with CRB1 and MPP4. Component of a complex whose core is composed of ARHGAP17, AMOT, MPP5/PALS1, INADL/PATJ and PARD3/PAR3. Heterodimer with MPP1. Interacts with MPP7.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Two highly conserved complexes are responsible for the assembly of tight junctions, the Crumbs-Pals1-Patj complex and the Cdc42-Par6-Par3-aPKC complex. Tight junctions assist in the formation of polarity in the epithelia by establishing a barrier to separate apical and basolateral membranes. Pals1, importantly, mediates interaction between the two complexes via interaction with Par6. Loss of Pals1 function results in delayed polarization, decreased transepithelial electrical resistance and an inability to form lumenal cysts. Because tumors exhibit perturbations in epithelial polarity, Pals1 presents a new potential target in the study of carcinogenesis.

Additional Information

Gene ID	64398
Other Names	MPP5; PALS1_HUMAN; PALS1; MAGUK p55 subfamily member 5; Membrane protein, palmitoylated 5; Protein associated with Lin-7 1;
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
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

PALS1 {ECO:0000303|PubMed:21479189, ECO:0000312|HGNC:HGNC:18669}

Function

Plays a role in tight junction biogenesis and in the establishment of cell polarity in epithelial cells (PubMed:16678097, PubMed:25385611). Also involved in adherens junction biogenesis by ensuring correct localization of the exocyst complex protein EXOC4/SEC8 which allows trafficking of adherens junction structural component CDH1 to the cell surface (By similarity). Plays a role through its interaction with CDH5 in vascular lumen formation and endothelial membrane polarity (PubMed:27466317). Required during embryonic and postnatal retinal development (By similarity). Required for the maintenance of cerebellar progenitor cells in an undifferentiated proliferative state, preventing premature differentiation, and is required for cerebellar histogenesis, fissure formation, cerebellar layer organization and cortical development (By similarity). Plays a role in neuronal progenitor cell survival, potentially via promotion of mTOR signaling (By similarity). Plays a role in the radial and longitudinal extension of the myelin sheath in Schwann cells (By similarity). May modulate SC6A1/GAT1-mediated GABA uptake by stabilizing the transporter (By similarity). Plays a role in the T-cell receptor-mediated activation of NF-kappa-B (PubMed:21479189). Required for localization of EZR to the apical membrane of parietal cells and may play a role in the dynamic remodeling of the apical cytoskeleton (By similarity). Required for the normal polarized localization of the vesicular marker STX4 (By similarity). Required for the correct trafficking of the myelin proteins PMP22 and MAG (By similarity). Involved in promoting phosphorylation and cytoplasmic retention of transcriptional coactivators YAP1 and WWTR1/TAZ which leads to suppression of TGFB1-dependent transcription of target genes such as CCN2/CTGF, SERPINE1/PAI1, SNAI1/SNAIL1 and SMAD7 (By similarity).

Cellular Location

Golgi apparatus. Cell membrane; Peripheral membrane protein. Endomembrane system; Peripheral membrane protein. Cell junction, tight junction. Cell junction, adherens junction. Cell projection, axon {ECO:0000250|UniProtKB:Q9JLB2}. Perikaryon {ECO:0000250|UniProtKB:Q9JLB2}. Apical cell membrane. Note=Localized to the tight junctions of epithelial cells (By similarity). Localized to the Golgi apparatus in T lymphocytes (PubMed:21479189). Localized to a subset of intracellular vesicles (By similarity). Localized to the Purkinje cell body and axon (By similarity). Localized to intercellular junctions in vascular endothelial cells (PubMed:27466317). Localized to Schmidt-Lanterman incisures, the adaxonal domain, and the inner part of paranodal loops in myelinating Schwann cells of the sciatic nerve (By similarity) Localized to apical membrane domains of the outer limiting membrane (OLM) junctions in the retina (By similarity). Colocalizes with CRB1 at the OLM, apical to the adherens junction (PubMed:15914641). Colocalizes with MPP1 in the retina at the OLM (PubMed:17584769). Colocalizes with MPP3 to the subapical region of adherens junctions in the retina OLM (PubMed:16519681). {ECO:0000250|UniProtKB:Q9JLB2, ECO:0000269|PubMed:15914641, ECO:0000269|PubMed:16519681, ECO:0000269|PubMed:17584769, ECO:0000269|PubMed:21479189, ECO:0000269|PubMed:27466317}

Tissue Location

Expressed at the outer limiting membrane in the retina (at protein level) (PubMed:15558731, PubMed:15914641, PubMed:16519681, PubMed:17584769). Expressed in T lymphocytes (at protein level) (PubMed:21479189). Expressed in the kidney (at protein level)

(PubMed:17584769).

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