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Claudin 16 Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP55270

Product Information

Application	IHC-P, IHC-F, IF, ICC, E
Primary Accession	Q9Y5I7
Reactivity	Rat, Dog, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	26078
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human Claudin 16
Epitope Specificity	95-150/305
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	Cell junction; tight junction. Cell membrane.
SIMILARITY	Belongs to the claudin family.
DISEASE	Defects in CLDN16 are the cause of hypomagnesemia type 3 (HOMG3) [MIM:248250]; also known as familial hypomagnesemia with hypercalciuria and nephrocalcinosis (FHHNC). HOMG3 is a progressive renal disease characterized by primary renal magnesium wasting with hypomagnesemia, hypercalciuria and nephrocalcinosis. Recurrent urinary tract infections and kidney stones are often observed. In spite of hypercalciuria, patients do not show hypocalcemia.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Tight junctions mediate the regulation of the paracellular pathway between epithelial and endothelial cells. They form close connections to eliminate the extracellular space and regulate the flow of solutes between cells. The human gene PCLN-1 (paracellin-1) is related to the claudin family of integral membrane proteins, which localize to tight junctions. PCLN-1 contains four transmembrane domains and intracellular amino and carboxy termini, characteristic of the other claudin family members, and is detected only at the tight junctions of kidney tissue. PCLN-1 forms an intercellular pore and controls the resorption of magnesium and calcium in the thick ascending limb of Henle (TAL). Mutations in PCLN-1 cause renal magnesium wasting, which may contribute to a rare autosomal recessive disease, renal hypomagnesemia with hypercalciuria and nephrocalcinosis.

Additional Information

Gene ID	10686
Other Names	Claudin-16, Paracellin-1, PCLN-1, CLDN16, PCLN1

Target/Specificity	Kidney-specific, including the thick ascending limb of Henle (TAL).
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,ICC=1:100-500,IF=1:100-500,ELISA=1:5000-10000
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	CLDN16 {ECO:0000303|PubMed:18188451, ECO:0000312|HGNC:HGNC:2037}
Function	Forms paracellular channels: coassembles with CLDN19 into tight junction strands with cation-selective channels through the strands, conveying epithelial permeability in a process known as paracellular tight junction permeability (PubMed:16234325, PubMed:18188451, PubMed:28028216). Involved in the maintenance of ion gradients along the nephron. In the thick ascending limb (TAL) of Henle's loop, facilitates sodium paracellular permeability from the interstitial compartment to the lumen, contributing to the lumen- positive transepithelial potential that drives paracellular magnesium and calcium reabsorption (PubMed:10390358, PubMed:11518780, PubMed:14628289, PubMed:16528408, PubMed:28028216).
Cellular Location	Cell junction, tight junction. Cell membrane; Multi-pass membrane protein. Note=Cotrafficks with CLDN19 from ER to tight junctions.
Tissue Location	Kidney-specific, including the thick ascending limb of Henle (TAL).