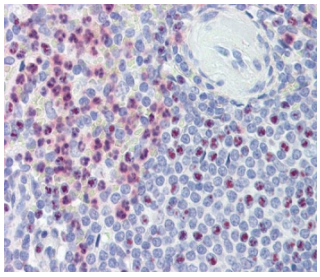
Polycystin 1 Antibody / PKD1 (R36500)

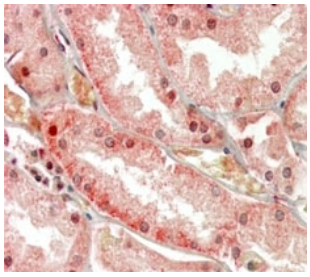
Catalog No.	Formulation	Size
R36500-100UG	0.5 mg/ml in 1X TBS, pH7.3, with 0.5% BSA (US sourced) and 0.02% sodium azide	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Antigen affinity purified
Clonality	Polyclonal (goat origin)
Isotype	Goat Ig
Purity	Antigen affinity
Gene ID	5587
Applications	Immunohistochemistry (FFPE) : 3-5ug/ml ELISA (peptide) LOD : 1:64000
Limitations	This Polycystin 1 antibody is available for research use only.



IHC staining of FFPE human spleen tissue with Polycystin 1 antibody. Required HIER: steamed antigen retrieval with pH6 citrate buffer; AP-staining.



IHC staining of FFPE human kidney tissue with Polycystin 1 antibody. Required HIER: steamed antigen retrieval with pH6 citrate buffer; AP-staining.

Description

Polycystin 1, also known as PKD1, is a protein encoded by the PKD1 gene and is crucial in the development of Polycystic Kidney Disease (PKD). PKD1 mutations are responsible for the majority of cases of autosomal dominant PKD, a genetic disorder that causes the formation of fluid-filled cysts in the kidneys. Polycystin 1 is a transmembrane protein that plays a vital role in cell-cell and cell-matrix interactions. It is primarily expressed in the kidneys, liver, pancreas, and other tissues, where it helps regulate cell proliferation, differentiation, and apoptosis. Dysfunction of Polycystin 1 disrupts these essential cellular processes, leading to the formation of cysts in the kidneys. Research has shown that Polycystin 1 interacts with other proteins, such as Polycystin 2, to form a protein complex that regulates calcium signaling and cell growth. Mutations in PKD1 disrupt this complex, causing aberrant calcium signaling and uncontrolled cell proliferation, which ultimately results in cyst formation and kidney damage. Studies have also suggested that Polycystin 1 may play a role in the mechanosensory function of kidney epithelial cells, allowing them to respond to changes in fluid flow and pressure within the nephron. Dysregulation of this mechanosensory function due to PKD1 mutations may contribute to the development and progression of PKD.

Application Notes

Optimal dilution of the Polycystin 1 antibody should be determined by the researcher.

Immunogen

Amino acids RTPLRAKNKVHP were used as the immunogen for this Polycystin 1 antibody.

Storage

Aliquot and store the Polycystin 1 antibody at -20oC.