ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

Podocin Antibodies

Cat. # PODO 11-P	**Human** Podocin control peptide # 1	**SIZE**: 100 ug
Cat. PODO 11-A	**Rabbit** Anti-Human Podocin IgG # 1 (aff pure)	**SIZE**: 100 ug

Nephrin is encoded by NPHS1 gene (chromosome 19q13.1), the core protein of the interpodocytes slit diaphragm of kidney glomerulus, these podocytes are highly differentiated with characteristic interdigitating foot processes covering the outer glomerular basement membrane, the space between these foot processes is spanned by a tight junction to provide the large surface area for filtration.

Nephrin interacts with podocin and with CD2AP C-terminal domain, It tends to be a signaling molecule that activates canonical protein kinase cascades, which is initiated by three closely related proteins called NEPH proteins (**NEPH1, NEPH2, & NEPH3**). **Podocin** (Human 383aa, NPHS2 gene on 1q25-q31 chrm; Mouse 385aa, sequence homology is 83.12% between human and mouse) Mutations in NPHS2 gene causes the autosomal recessive form of steroid resistant nephrotic syndrome occurring mainly in children and is characterized by massive proteinuria. The protein has no signal peptide but a transmembrane region exists. Podocin plays a role in regulation of glomerular permeability and interacts with nephrin. Podocin is expressed in kidney, testis, fetal heart and liver.

Source of Antigen and Antibodies

Antigen	16-aa peptide from Human Podocin; **Designation (PODO 11-P, control peptide)** conjugated to KLH, **Epitope location**~ C-terminal, Cytoplasmic domain
Ab Host/type	Rabbit, Polyclonal Aff pure IgG (**cat # PODO 11-A**) purified over antigen-agarose column
2-ab	**Goat Anti-rabbit IgG-HRP** cat # 20320 (AP, biotin, FITC conjugates also available)
-ve control IgG	# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as –ve control

Form & Storage of Antibodies/Peptide Control

Affinity pure IgG

100 ug/100ul solution lyophilized powder

Supplied in **Buffer**: PBS+0.1% BSA

Reconstitute powder in PBS at 1mg/ml

Control/blocking peptide

100 ug/100 ul solution lyophilized powder

Supplied in Buffer: PBS pH 7.5,

Reconstitute powder in PBS at 1 mg/ml.

Storage

Short-term: unopened, undiluted liquid vials at -20OC and powder at 4oC or -20oC..

Long-term: at –20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at –20oC or below.
Shipping: 4oC for solutions and room temp for powder.

Recommended Usage

Western Blotting (1-10 ug/ml for affinity pure antibody using ECL technique).

ELISA: Control peptide can be used to coat ELISA plates at 1 ug/ml and detected with antibodies (0.5-1 ug/ml for affinity pure).

Histochemistry & Immunofluorescence: Not tested. We recommend the use of aff pure IgG at 2-20 ug/ml.

Specificity & Cross-reactivity

The Human **PODO-11** control peptide is 100% conserved in mouse. and 93% in rat No significant sequence homology is seen with other related family members Antibody cross-reactivity in various species has not been studied. Control peptide, because of its low mol. Wt (<3 kDa), is not suitable for Western. It should be used for ELISA or antibody blocking experiments (use 5-10 ug control peptide per 1 ug of aff pure IgG or 1 ul antiserum) to confirm antibody specificity (see detailed protocol see detailed protocol at the web site).

General References: Boute N et al (2000) Nat. Genet, 25, 125-125, and Nat Genet. 24 (4) 349-354; Huber, T. B et al (2001) JBC. 276 (45) 41543-41546; Heli Putaala et al (2001) Human Mol. Gen.10, 1-8.

Citations of for podocin (see updated list at the web site)

Wai Lai K, 2007, J. Am. Soc. Nephrol., 18: 1476 - 1485, ,
Kramer J, 2006, Differentiation 74, 91-104, IHC,
Garovic VD, 2007, Nephrol Dial Transplant (2007) 22: 1136–1143, , IHC
Sengoelge G, 2005, Am J Physiol Renal Physiol. 288, 1290-1300, , IHC

*This product is for In vitro research use only.

Related material available from ADI

Antibodies & Peptides: Nephrin related proteins (NEPH 1-3, Filtrin, Podocin, Podocalyxin).

PODO 11-A-P 71212A

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