

Active Recombinant Human NPHS2 protein, His-tagged

Cat. No. NPHS2-251H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Human NPHS2(Lys259-Leu383) fused with an N-terminal Met and a C-terminal 6-His tag was expressed in E. coli.
Species	Human
Source	E.coli
ProteinLength	259-383 a.a.
Description	Podocin, encoded by the NPHS2 gene, is an approximately 50 kDa membrane protein that plays an important role in podocyte function in the kidney. Loss of Podocin function results in albuminuria, hypercholesterolemia, hypertension, and renal failure. Human Podocin consists of a 102 amino acid (aa) cytoplasmic domain, a 21 aa intramembrane segment, and a second 262 aa cytoplasmic domain. Alternative splicing generates a short isoform with a 68 aa deletion in the second cytoplasmic domain. Within aa 259-383 (the region common to both isoforms), human Podocin shares 90% aa sequence identity with mouse and rat Podocin. Podocin localizes to areas of cell-cell contact between podocytes in the renal glomerulus. It associates into oligomers and forms complexes with Nephtrin, CAR, ZO-1, and the cation ion channel TRPC6. It contributes to podocyte function by regulating the activation of TRPC6 and Nephtrin mediated signaling. Multiple polymorphisms in NPHS2 are associated with steroid-resistant nephrotic syndrome.
Predicted N Terminal	Met

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Form	Lyophilized from a 0.2 µm filtered solution in PBS.
Bio-activity	Measured by its binding ability in a functional ELISA. When recombinant human Nephric is immobilized at 1 µg/mL, 100 µL/well, Recombinant Human Podocin/NPHS2 binds with a typical ED50 of 0.8-4 µg/mL.
Molecular Mass	Predicted Molecular Mass: 15 kDa SDS-PAGE: 13 kDa, reducing conditions
Endotoxin	<0.1 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 centigrade as supplied. 1 month, 2 to 8 centigrade under sterile conditions after reconstitution. 3 months, -20 to -70 centigrade under sterile conditions after reconstitution.
Reconstitution	Reconstitute at 200 µg/mL in PBS.

GENE INFORMATION

Gene Name	Nphs2 nephrosis 2 homolog, podocin (human) [Mus musculus]
Official Symbol	NPHS2
Synonyms	NPHS2; nephrosis 2 homolog, podocin (human); podocin; PDCN; SRN1; AI790225;
Gene ID	170484

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mRNA Refseq	NM_130456
Protein Refseq	NP_569723
UniProt ID	Q91X05

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