Human Nephrin Antibody

Antigen Affinity-purified Polyclonal Sheep IgG
Catalog Number: AF4269

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Nephrin in direct ELISAs and Western blots. In direct ELISAs, less than 20% cross-reactivity with recombinant mouse Nephrin is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Nephrin Gln23-Thr1029 Accession # O60500
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μm filtered solution in PBS.

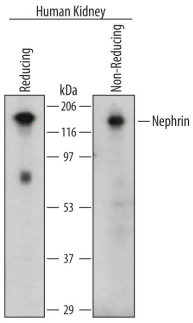
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Immunohistochemistry	1-15 µg/mL	See Below

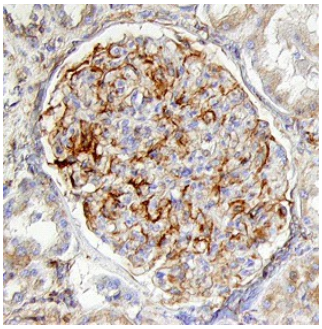
DATA

Western Blot



Detection of Human Nephrin by Western Blot. Western blot shows lysates of human kidney tissue under reducing and non-reducing conditions. PVDF membrane was probed with 1 µg/mL Sheep Anti-Human Nephrin Antigen Affinity-purified Polyclonal Antibody (Catalog # AF4269) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band for Nephrin was detected at approximately 150 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 2.

Immunohistochemistry



Nephrin in Human Kidney. Nephrin was detected in immersion fixed paraffin-embedded sections of human kidney using 1.7 µg/mL Sheep Anti-Human Nephrin Antigen Affinity-purified Polyclonal Antibody (Catalog # AF4269) overnight at 4 °C. Tissue was stained with the Anti-Sheep HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS019) and counterstained with hematoxylin (blue). Specific labeling was localized to podocytes in glomeruli. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Nephrin, also known as renal glomerulus-specific cell adhesion receptor and nephrosis 1 (NPHS1) is a 185-200 kDa type I transmembrane protein belonging to the immunoglobulin (Ig) superfamily. It is expressed on podocytes and is an essential component of the interpodocyte-spanning slit diaphragm complex. Nephrin forms cis-hetero-oligomeric complexes with Neph1, followed by trans-homophilic interaction with Nephrin on opposing cells. Mutations in the Nephrin gene is the pathogenic cause of congenital nephrotic syndrome. Mature human Nephrin contains a 1033 aa extracellular region and a 165 aa cytoplasmic tail. One potential soluble splice form is known where aa's 1056-1095 are deleted, eliminating the transmembrane region. Over aa 23-1029, human Nephrin shares 84% and 89% aa sequence identity with mouse and canine Nephrin, respectively.

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