

#### DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Human                                                                                                                                                                                                                                                                       |
| <b>Specificity</b>        | Detects human Nephrin in direct ELISAs and Western blots. In direct ELISAs, less than 20% cross-reactivity with recombinant mouse Nephrin is observed.                                                                                                                      |
| <b>Source</b>             | Polyclonal Sheep IgG                                                                                                                                                                                                                                                        |
| <b>Purification</b>       | Antigen Affinity-purified                                                                                                                                                                                                                                                   |
| <b>Immunogen</b>          | Mouse myeloma cell line NS0-derived recombinant human Nephrin<br>Gln23-Thr1029<br>Accession # O60500                                                                                                                                                                        |
| <b>Conjugate</b>          | Alexa Fluor 594<br>Excitation Wavelength: 590 nm<br>Emission Wavelength: 617 nm                                                                                                                                                                                             |
| <b>Formulation</b>        | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |

#### 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.

|                             |                                                                        |
|-----------------------------|------------------------------------------------------------------------|
| <b>Western Blot</b>         | Optimal dilution of this antibody should be experimentally determined. |
| <b>Immunohistochemistry</b> | Optimal dilution of this antibody should be experimentally determined. |

#### PREPARATION AND STORAGE

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied                          |

#### 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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