

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Kirrel2/NEPH3 in direct ELISAs and Western blots. In direct ELISAs, approximately 20% cross-reactivity with recombinant mouse Kirrel2 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Kirrel2/NEPH3 Gly21-Arg503 Accession # Q6UWL6
Conjugate	Alexa Fluor 532 Excitation Wavelength: 534 nm Emission Wavelength: 553 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *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.

Western Blot Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Kirrel2 (kin of irregular chiasm-1-like 2), also known as filtrin, NEPH3 (nephrin-like 3) or NLG1 (nephrin-like gene 1), is a 107 kDa type I transmembrane adhesion protein belonging to the immunoglobulin (Ig) superfamily (1, 2). Kirrel2 is expressed both in pancreatic islet β cells and kidney glomerulus, and is also found in brain and lymph nodes (1-9). Human Kirrel2 cDNA encodes a 708 amino acid (aa) protein that contains a 19 aa signal sequence, a 491 aa extracellular domain with five C2-type Ig-like domains, a 21 aa transmembrane sequence and a 177 aa intracellular domain with a nephrin-like podocin binding site (aa 597-606) (4, 5). An extracellular RGD sequence allows for cell attachment (4). The extracellular domain of human Kirrel2 shares 86%, 84%, 89% and 87% aa identity with mouse, rat, equine and bovine Kirrel2, respectively. Alternately spliced human Kirrel2 isoforms of 688, 633 and 583 aa have been described (6). These are, respectively, either missing aa 192-211, or have a 23 aa alternate C-terminus in place of aa 611-708, with or without aa 22-71 at the N-terminus. Human Kirrel2 is downregulated in glomeruli of patients with proteinuria, suggesting an involvement in the maintenance of the glomerular filtration barrier (7). Autoantibodies to Kirrel2 have been identified in a subset of humans with type I diabetes, indicating its involvement with islet β cell function (8). In the brain, Kirrel2 is present in olfactory neurons, but only when they are active; homophilic adhesion of Kirrel2 is postulated to help correlate nerves identifying the same odorant (9). It is also a marker for mouse early postmitotic neural precursors in the ventricular zone of the developing mouse spinal cord (10).

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.