Mouse Kirrel2/NEPH3 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF2930

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Kirrel2/NEPH3 in direct ELISAs and Western blots. In direct ELISAs and Western blots, approximately 40% cross-reactivity with recombinant human Kirrel2 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Kirrel2/NEPH3 Ser19-Asp501 Accession # Q7TSU7
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 either lyophilized or 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	0.1 µg/mL	Recombinant Mouse Kirrel2 (Catalog # 2930-K2)

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

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 superfamily (1, 2). Kirrel2 is one of several proteins expressed both in pancreatic islet β cells and kidney glomerulus, and is also found in brain and lymph nodes (1-9). Mouse Kirrel2 cDNA encodes a 700 amino acid (aa) protein that contains a 16 aa signal sequence, a 491 aa extracellular domain with five C2-type Ig-like domains, a 21 aa transmembrane sequence and a 172 aa intracellular domain with a nephrin-like, conserved podocin binding site (mouse aa 589-598) (4, 5). An extracellular RGD sequence allows for cell attachment (4). The extracellular domain of mouse Kirrel2 shares 96%, 86%, 85% and 85% aa identity with rat, human, equine and bovine Kirrel2, respectively. It shares 35-37% aa identity with other mouse Kirrel proteins. One mouse isoform that has been described is missing the transmembrane domain (aa 501-533), while another encodes only portions of Ig domains 1-4 (5). Human Kirrel2 is downregulated in glomeruli of patients with proteinuria, suggesting an involvement in the maintenance of the glomerular filtration barrier (6). Autoantibodies to Kirrel2 have been identified in a subset of humans with type I diabetes, indicating its involvement with islet β cell function (7). 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 (8). It is also a marker for mouse early postmitotic neural precursors in the ventricular zone of the developing mouse spinal cord (9).

References:

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