Recombinant Human kirre like nephrin family adhesion molecule 1 Protein, His&Flag tagged

Cat. No. KIRREL1-096H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human KIRREL1 protein (Q96J84) (Gln 17-Leu 493) with both His, Flag tag at the C-terminus was expressed in HEK293.
Species	Human
Source	HEK293
ProteinLength	17-493aa
Description	Kirrel1, also called NEPH1, is a 90-110 kDa type I transmembrane glycoprotein that belongs to the NEPH family of the immunoglobulin superfamily. The 757 amino acid (aa) human Kirrel1 contains a 16 aa signal sequence, a 483 aa extracellular domain (ECD) with five C2-type Ig-like domains, a 21 aa transmembrane sequence and a 237 aa cytoplasmic domain. The ECD also contains a site for FGF/FGF R interaction, and an RGD site that may allow integrin-mediated cell attachment. Five IgG-like repeats characterize the extracellular domain. The interaction of these five IgG-like motifs with the eight IgG-like motifs in Nephrin form a zipper-like meshwork around the glomerular capillaries in podocytes. This interaction is what forms the structural basis of the slit diaphragm regulating macromolecule movement from the blood. Human Kirrel1 shares 98% aa identity with mouse and rat homologs, respectively, within the ECD. Kirrel1 expression has been mainly studied in the kidney glomerular slit diaphragm, but its expression with nephrin or other family members has also been reported in central nervous system neurons, pancreas and placenta. Kirrel1 forms cis

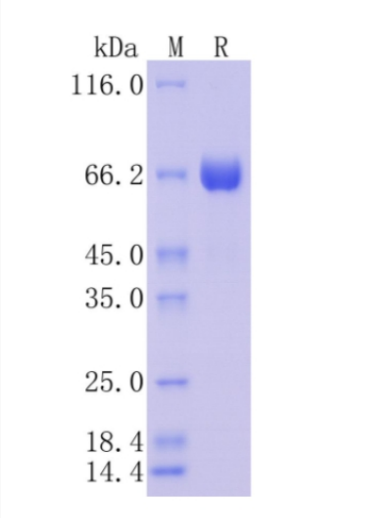
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	hetero-oligomers with Nephrin, which brings together signaling molecules that direct actin polymerization. This interaction is essential for barrier function in the slit diaphragm, and mice deleted for Kirrel1 die perinatally due to proteinuria and failure to thrive.
Tag	C-His&Flag
Molecular Mass	54.8 kDa
Endotoxin	Less than 1.0 EU/μg by the LAL method.
Purity	>95% as determined by SDS-PAGE.
Storage	Please avoid repeated freeze-thaw cycles. Samples are stable for up to twelve months from date of receipt at -20 to -80 centigrade. It is recommended that aliquot the reconstituted solution to minimize freeze-thaw cycles.
Storage Buffer	Lyophilized from a 0.2 μm filtered solution of PBS, pH7.4, 5% Trehalose, 5% mannitol.
Reconstitution	Reconstitute at 250 μg/mL in sterile water.

GENE INFORMATION

Gene Name	KIRREL1 kirre like nephrin family adhesion molecule 1 [Homo sapiens (human)]
Official Symbol	KIRREL1
Synonyms	KIRREL1; kirre like nephrin family adhesion molecule 1; NEPH1; KIRREL; NPHS23; kin of IRRE-like protein 1; kin of IRRE like; kin of irregular chiasm-like protein 1; nephrin related; nephrin-like protein 1

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Gene ID	55243
mRNA Refseq	NM_018240.7
Protein Refseq	NP_060710.3
MIM	607428
UniProt ID	Q96J84
Protein on SDS-PAGE under reducing (R) condition.	

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