

## Kirrel1/NEPH1 Protein, Human (HEK293, His)

<b>Cat. No.:</b>	HY-P76468
<b>Synonyms:</b>	Kin of IRRE-like protein 1; Kin of irregular chiasm-like protein 1; Nephrin-like protein 1; Kirrel1; Neph1
<b>Species:</b>	Human
<b>Source:</b>	HEK293
<b>Accession:</b>	Q96J84 (M1-L493)
<b>Gene ID:</b>	55243
<b>Molecular Weight:</b>	Approximately 53.5 kDa.

### PROPERTIES

<b>Biological Activity</b>	Measured by the ability of the immobilized protein to support the adhesion of MS1 mouse pancreatic islet endothelial cells. When cells are added to KIRREL coated plates (15 µg/mL, 100 µL/well), > 20% will adhere specifically after 90 minutes at 37 °C.
<b>Appearance</b>	Lyophilized powder.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
<b>Endotoxin Level</b>	<1 EU/µg, determined by LAL method.
<b>Reconstitution</b>	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O.
<b>Storage &amp; Stability</b>	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
<b>Shipping</b>	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

<b>Background</b>	Kirrel1/NEPH1 Protein is crucial for the proper function of the glomerular filtration barrier in the kidneys. It plays a vital role in maintaining a stable podocyte architecture by facilitating the interdigitating foot processes connected by specialized cell-cell junctions called the slit diaphragm. This protein acts as a signaling molecule and requires the presence of TEC kinases to fully activate the transcription factor AP-1. Kirrel1/NEPH1 interacts with TJP1/ZO-1 and NPHS2/podocin, and its interaction with NPHS1/nephrin relies on Kirrel1/NEPH1 glycosylation. It forms homodimers through its Ig-like domains and, when tyrosine-phosphorylated, it interacts with GRB2.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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