Recombinant NPHP4 protein (His tag)

Catalog Number	539542
Synonyms	Nephroretinin
Species	Human
Expression System	E. coli
Accession	O75161
Molecular Weight	Predictes a molecular mass of 54.23 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 54 kDa band.

Product Information

Sequence Region	594-1069
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>86%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 594-1069 aa (O75161) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant Human Nephrocystin-4 (NPHP4) Fragment (aa 594-1069) is a high-purity protein designed for structural and biochemical studies. This 476-amino acid fragment represents a stable, soluble region of Nephrocystin-4, optimized for research applications exploring ciliary function, junction organization, and signaling pathways. Nephrocystin-4, encoded by the NPHP4 gene, plays critical roles in cellular organization and signaling. It contributes to apical junction organization through the NPHP1-4-8 module and supports functional cilia formation, particularly in organizing subapical actin networks in multiciliated epithelial cells. The protein modulates key signaling pathways by negatively regulating canonical Wnt signaling through stabilization and nuclear translocation of JADE1, while promoting non-canonical Wnt-PCP signaling. Additionally, Nephrocystin-4 acts as a negative regulator of the Hippo pathway through association with LATS1, influencing WWTR1/TAZ phosphorylation and localization. Subcellularly, it localizes to the cytoplasm, cilium basal body, centrosome, tight junctions, and nucleus, with accumulation at basolateral tight junctions in confluent renal cells and presence at the ciliary transition zone and retinal photoreceptor connecting cilium.