Nephrocystin-4 (NPHP4) Human Recombinant Protein

PRODUCT OVERVIEW

Product Name	Nephrocystin-4 (NPHP4), Recombinant Protein
Full Product Name	Recombinant Human Nephrocystin-4 (NPHP4) , partial
Product Gene Name	NPHP4 recombinant protein
Host	E Coli or Yeast or Baculovirus or Mammalian Cell
Form/Format	Lyophilized or liquid (Format to be determined during the manufacturing process)
Purity/Purification	Greater or equal to 85% purity as determined by SDS-PAGE. (lot specific)
Preparation and Storage	Store at -20 degrees C. For long-term storage, store at -20 degrees C or -80 degrees C. Store working aliquots at 4 degrees C for up to one week. Repeated freezing and thawing is not recommended.
Molecular Weight	99,953 Da
Tag Information	This protein contains an N-terminal tag and may also contain a C-terminal tag. Tag types are determined by various factors including tag-protein stability, please inquire for tag information.
Sterility	Sterile filter available upon request.
Endotoxin	Low endotoxin available upon request.
OMIM	606966
3D Structure	ModBase 3D Structure for O75161
Species	Human
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for NPHP4 recombinant protein	This gene encodes a protein which contains a proline-rich region. The encoded protein may function in renal tubular development and function. This protein interacts with nephrocystin. Mutations in this gene are associated with nephronophthisis type 4. Multiple alternative transcript variants have been described but their full-length nature has not been determined.
Other Notes	Small volumes of NPHP4 recombinant protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for NPHP4 purchase	MBS1204403 is a recombinant protein targeting NPHP4. Also known as Recombinant Human Nephrocystin-4 (NPHP4) , partial. Host: E Coli or Yeast or Baculovirus or Mammalian Cell.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for NPHP4. It may not necessarily be applicable to this product.

NCBI GI #	615276301
NCBI GeneID	261734
NCBI Accession #	NP_001278522.1
UniProt Primary Accession #	O75161
UniProt Secondary Accession #	Q8IWC0
UniProt Related Accession #	O75161

GenBank Nucleotide #	NM_001291593.1
NCBI Official Full Name	nephrocystin-4 isoform b
NCBI Official Synonym Full Names	nephrocystin 4
NCBI Official Symbol	NPHP4
NCBI Official Synonym Symbols	POC10; SLSN4
UniProt Protein Name	Nephrocystin-4
UniProt Synonym Protein Names	Nephroretinin
Protein Family	Nephrocystin
UniProt Gene Name	NPHP4
UniProt Synonym Gene Names	KIAA0673
NCBI Protein Information	nephrocystin-4
NCBI Summary for NPHP4	This gene encodes a protein involved in renal tubular development and function. This protein interacts with nephrocystin, and belongs to a multifunctional complex that is localized to actin- and microtubule-based structures. Mutations in this gene are associated with nephronophthisis type 4, a renal disease, and with Senior-Loken syndrome type 4, a combination of nephronophthisis and retinitis pigmentosa. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Apr 2014]
UniProt Comments for NPHP4	Involved in the organization of apical junctions; the function is proposed to implicate a NPHP1-4-8 module (PubMed:19755384, PubMed:21565611). Does not seem to be strictly required for ciliogenesis (PubMed:21565611). Required for building functional cilia. Involved in the organization of the subapical actin network in multiciliated epithelial cells. Seems to recruit INT to basal bodies of motile cilia which subsequently interacts with actin-modifying proteins such as DAAM1 (). In cooperation with INVS may downregulate the canonical Wnt pathway and promote the Wnt-PCP pathway by regulating expression and subcellular location of disheveled proteins. Stabilizes protein levels of JADE1 and promotes its translocation to the nucleus leading to cooperative inhibition of canonical Wnt signaling (PubMed:21498478, PubMed:22654112). Acts as negative regulator of the hippo pathway by association with LATS1 and modifying LATS1-dependent phosphorylation and localization of WWTR1/TAZ (PubMed:21555462).
Research Articles on NPHP4	**1.** Inherited 3 deleterious mutations in two nephronophthisis genes, NPHP3 and NPHP4 cause unusually severe form of infantile nephronophthisis.
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