

Product datasheet for RC217677

Nephrin (NPHS1) (NM_004646) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Nephrin (NPHS1) (NM_004646) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Nephrin
Synonyms:	CNF; nephrin; NPHN
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC217677 representing NM_004646 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCCCTGGGGACGACGCTCAGGGCTTCTCCTGCTCCTGGGGCTGCTGACTGAAGGCCTGGCGCAGT
TGGCGATTCTGCCTCCGTTCCCGGGGCTTCTGGGCCCTGCCTGAAAACCTGACGGTGGTGGAGGGGGC
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TCCACCTGCACATCGAGGCTGTGACCTCAGCGATGACGCGGAGTATGAGTGCCAGTCCGCGCTCTGA
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CCGCAGGAGTCGCGGCGCGTGCATCTCGGCAGCGTGGAGAAATCTGGGAGCACCTTCTCCCAGAGCTGG
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ACAAGGATGACGACGATAAGGTTAA

Protein Sequence: >RC217677 representing NM_004646
 Red=Cloning site Green=Tags(s)

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 AAQDYALFTCTATNALGSDQTNILVSI SRPDPSPGLKVYSLTPHSVGLEWKPGFDGGLPQRF CIRYEAL
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 TEPPSGPSGLPLLPVLFALGLLLLSNASCVGGVLRRLRRLAEGISEKTEAGSEEDRVNEYEESQWT
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 PLYDEVQMGPWDLHWPEDTYQDPRGIYDQVAGDLDTLEPDSLPELFRGHLV

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mg3369_e01.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_004646

ORF Size: 3723 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM_004646.4](#)

RefSeq Size: 4285 bp

RefSeq ORF: 3726 bp

Locus ID: 4868

UniProt ID: [O60500](#)

Cytogenetics: 19q13.12

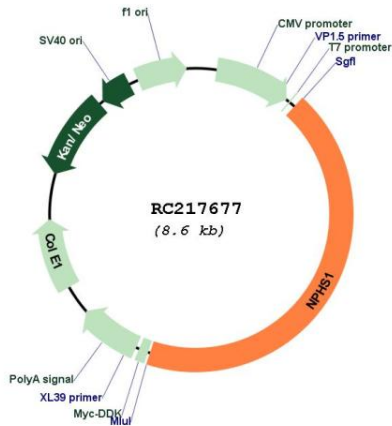
Protein Families: Druggable Genome, Transmembrane

MW: 134.6 kDa

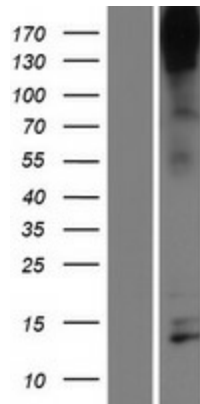
Gene Summary:

This gene encodes a member of the immunoglobulin family of cell adhesion molecules that functions in the glomerular filtration barrier in the kidney. The gene is primarily expressed in renal tissues, and the protein is a type-1 transmembrane protein found at the slit diaphragm of glomerular podocytes. The slit diaphragm is thought to function as an ultrafilter to exclude albumin and other plasma macromolecules in the formation of urine. Mutations in this gene result in Finnish-type congenital nephrosis 1, characterized by severe proteinuria and loss of the slit diaphragm and foot processes.[provided by RefSeq, Oct 2009]

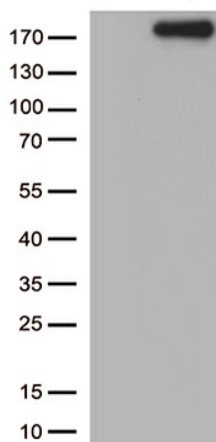
Product images:



Circular map for RC217677



Western blot validation of overexpression lysate (Cat# [LY417848]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC217677 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY NPHS1 (Cat# RC217677, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-NPHS1 antibody (Cat# [TA813415])(1:1000)