

Product datasheet for **MG211822**

Wnk4 (NM_175638) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Wnk4 (NM_175638) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Wnk4
Synonyms:	2010002J11Rik; Pha2b; Prkwk4
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>MG211822 representing NM_175638 Red=Cloning site Blue=ORF Green=Tags(s)

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GCC**CGATCGCC**

ATGCTAGCACCTCGAAATACGGAGACTGGGGTCCCATGTCCCAAACCGAGGCTGACCTGGCTCTGCGGC
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GCCTTGGGCTTAGTCTGTGAAGCTGACTACCAGCCAGTGGCCCGTGCAGTTCGAGAACGGGTTGCTGCTA
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ATCATGCGAAGGAACTCTGAGTGGCAGCAGCACCGGCTCCAGGAGCAGCGGCAAGCAAGGGGTGA
CATTCCCGGGGATATTGCAGGATG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >MG211822 representing NM_175638
 Red=Cloning site Green=Tags(s)

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MLAPRNTETGVPMSTQTEADLALRSPAL TSTGPTLGGPPRRVRRFSGKAEPRRSPSRSSVDLGLL
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TRTRPLE - GFP Tag - V

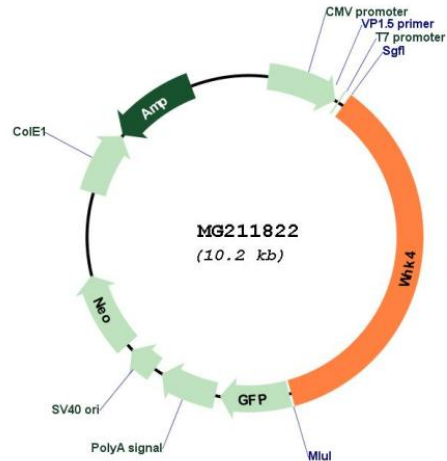
Restriction Sites:

SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_175638

ORF Size: 3666 bp

OTI Disclaimer: 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.

RefSeq: [NM_175638.3](#), [NP_783569.1](#)

RefSeq Size: 4148 bp

RefSeq ORF: 3669 bp

Locus ID: 69847

UniProt ID: [Q80UE6](#)

Cytogenetics: 11 D

Gene Summary:

Serine/threonine kinase which plays an important role in the regulation of electrolyte homeostasis, cell signaling, survival and proliferation. Acts as an activator and inhibitor of sodium-coupled chloride cotransporters and potassium-coupled chloride cotransporters respectively. Activates SCNN1A, SCNN1B, SCNN1D, SGK1, TRPV5 and TRPV6. Regulates the activity of the thiazide-sensitive Na-Cl cotransporter, SLC12A3, by phosphorylation which appears to prevent membrane trafficking of SLC12A3. Also inhibits the renal K(+) channel, KCNJ1, via a kinase-independent mechanism by which it induces clearance of the protein from the cell surface by clathrin-dependent endocytosis. WNK4 appears to act as a molecular switch that can vary the balance between NaCl reabsorption and K(+) secretion to maintain integrated homeostasis. Phosphorylates NEDD4L. Acts as a scaffold to inhibit SLC4A4 as well as CFTR activities and surface expression, recruits STK39 which mediates the inhibition (PubMed:21317537).[UniProtKB/Swiss-Prot Function]