

Product datasheet for MC223989

Wnk4 (NM_175638) Mouse Untagged Clone

Product data:

Product Type: Expression Plasmids
Product Name: Wnk4 (NM_175638) Mouse Untagged Clone
Tag: Tag Free
Symbol: Wnk4
Synonyms: 2010002J11Rik; Pha2b; Prkwk4
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Cell Selection: Neomycin
Fully Sequenced ORF: >MC223989 representing NM_175638
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCCGCGATCGCC

ATGCTAGCACCTCGAAATACGGAGACTGGGGTCCCATGTCCCAAACCGAGGCTGACCTGGCTCTGCGGC
 CATCTCCGGCTCTCACCTCTACGGGGCCGACCCGCTGGGGCCACCTCCTCGCCGAGTGCGCCGCTTCTC
 TGGGAAGGCTGAGCCTCGGCCGCGCTCTTCGAGACCTAGCCGCCGAGCTCAGTCGATCTGGGACTGCTG
 AGCTCCTGGTCTCAACAGCCTCACTCCTTCCGGAACCCCGGATCCTCCAGACTCCGCTGGCCCCACGA
 GGAGCCCCACCTTCAAGCTCTAAAGAACCCCGAGGGCAGATGGATGGGGGCAGCTCCCGTGAAGGCTGT
 GGACTCTGCATGTCTGAGCTTACGGGATCTTCAGGAGGTCCAGGGTCCCGGGAGCCACCGAGGGTCTCT
 GATGCTGCAGCCCGGGAACGGCGCGGGAGCAGGAAGAAAAGAGGACACAGAAACCCAGGCTGTGGCAA
 CGTCTCCGGACGGCCGATACCTCAAGTTTGACATTGAGATTGGAAGAGGTTCTTCAAGACCGTGTATCG
 AGGGCTAGACACCGACACCACGGTAGAGGTGGCCTGGTGTGAGCTGCAGACCCGAAACTCTCTCGGGCC
 GAGCGGCAGCGTTTCTCCGAGGAAGTTGAGATGCTCAAGGGCTGCAGCACCCCAACATCGTCCGCTTCT
 ATGACTCCTGGAAGTCGGTGTGAGGGCCAGGTTTGCATCGTGTGGTACAGAACTCATGACCTCGGG
 CACGCTCAAGACGTACCTGAGGCGGTTCCGCGAAATGAAGCCCGAGTCCTTTCAGCGCTGGAGTCGCCAG
 ATTCTACGGGACTTCATTTCTTCATTCCCGAGTGCCCCCATCCTGCACCGAGATCTCAAGTGTGACA
 ACGTCTTCATTACTGGCCCTTACGGCTCTGTCAAATCGGAGACCTCGGACTGGCCACGCTCAAGCGCGC
 CTCCTTTGCCAAGAGCGTCATTGGGACCCCGAATTCATGGCTCCTGAGATGTACGAGGAAAAGTACGAC
 GAGGCTGTGGATGTGTACGCTTTGGCATGTGCATGCTGGAGATGGTACGTCTGAGTATCCCTACTCCG
 AGTGTGAGAAATGCAGCACAAATCTACCGAAGGTCACTTCGGGCACAAAGCCCAACAGCTTCTACAAGT
 GAAGATGCCAGAGGTGAAGGAGATCATTGAAGGCTGCATCCGCACGATAAGAACGAGAGGTTACCATC
 CAGGATCTCCTGGCCATGCGTTTCTCCGCGAGGAACGAGGTGTGCACGTGGAGCTGGCAGAGGAAGATG
 ATGGAGAGAAGCCGGCCCTCAAGCTCTGGCTGCGCATGGAGGATGCGCGCGCGGGGGGCGTCCACGAGA
 CAACCAGGCCATCGAGTTCTGTTTCAGCTCGGCCGGGACGCTGCGGAGGAGGTGGCTCAGGAGATGGTA
 GCCTTGGGCTTAGTCTGTGAAGCTGACTACCAGCCAGTGGCCCGTGCAGTTTCAGAACGGGTTGCTGCTA



TCCAGCGGAAGCGGGAGAAGCTTCGAAAAGCTAGGGAATTGGAGTTCTCCCACCAGACTCAGGACCTCC
TCCAGCAACTGTGTCTCTGGCTCCGGTCCCGGAGTGCCTTCCCCCAGAGCCTGAGGAGCCAGAGGCT
GACCAGCATCAATCCTTCTCTCCGCCATGCCAGCTACTCATCAACTACATCTGATTGCGAGACTGATG
GCTACCTCAGTTCCTCCGGTTCCTGGATGCCTCAGACCTGCCCTTCCAGCCCCGGGGGTTACCATC
CAGCCCCGCTGAATCCCATCTCTGCTTGCCTCGGTTTTGCCTTGTCTATTCCACGGTCTGGCCCTGGC
AGTGACTTTTCTCTGGGATAGCTACGCCCTCAGATCGCGCATCAGGCCCTAGTGACATGGGAGAAGGGG
GGCAAATGAGGAAAAATCCAGTGAAGACTCTTCGACGGAGACTCGATCCCGGCTCCGGTCACTAGTGT
CTCAGACCAGAGCGACAGAGTTGTGAGTGTGAGCTGCAGACTCAACAACAGCAAGATGGTGACGTTCCGA
TTTGATCTGGATGGGACAGCCAGAAGAAATTGCAGCTGCCATGGTATAACAATGAGTTCATCTGCCCT
CGGAGCGAGATGGATTCTGAGCCGGATCCGGGAGATTATCCAGCGAGTGGAGACCCTGTGAAGAGAGA
TGCTGGTCCCCCAGAGGCTGCTGAAGATGCCCTGAGCCCCAGGAAGAGCCAGCAGCCCTGCCTGCCCTC
CCAGGCCACCCAATGCAGAGCCCCAGAGAAGCATCTCCCAGAACAGAGGAGCTGGGCAGCCTTCTCCA
CCTCTCCATCTTCTCTGGCACCCTTGTCCCTGGGGCCCCCTTTCCCTGGGACCCTCTGTCTT
CCCATGCCCATCTTCTCTATCACTTACCCTCATGCTATCCCTGCCATTCTCCAGGTCTCTTCAAAC
CCCTATCCACAGGCCCCAGTTCCTGCTTCCCTATCCTCCAGTCTTCTCAGGTTCCACTTCCATCTT
CCTCTCTCCCATCAGCGCTCCCTCCATTCTCTCTAGTTATCCCCAAGACCCTTAGCCCCACTTC
TCTTCCGGTCTGCCCTCTCTCCCTCTTCCCTCTACCCACAGCAGCCCTCTCCTCTCTCTGGCTAGT
GCCTTCTCTCTGGCTGTGATGACTGTGGCCAGTCCCTGTGTCCCCATCCCTGGACTTCTTCTCAGT
CTCCTCCAGCCCCCAGGTCCTCTGCCTAGCCTGCCCTTTCCCTTGTCTTGTGACCAGGAGAGCCT
TTCGGCCCAAACAGCTGAGACAGAGAATGAGGCTTCCCGTAATCCTGCTCAGCCACTACTGGGTGATGCT
AGACTGGCACCTATATCTGAAGAGGAAAGCCCCAGCTTGTGGCCGTTTCCAAGTACTCATCTAAGG
AACCAGCAGAGCCTCCCCTGCAACCAGCATCCCCAACTCTCCAGATCCCTAAAGTGCCAAGCCCTCC
GCTGACCTCAGAGAGCTCAGACACAGAGGACAGTGTGCAGGAGGCCAGAGACTAGGGAGGCTCTGGCA
GAGAGTGACCGTGCAGCCGAAGGCTGGGGTTGCGGTGATGATGAAAAGGATGAAGGGAAAGAACCCC
TACTTGGAGGCAGTTCCCAATCTTGAAGCATCCAGCCAGTGTGGATGAACTACTCTACAGCAGCCT
GTGTCTGAGCAGTGAAGAGTCCGAGAGCAGCGGGAAAGACGAGGAATTCTGGGCTGAGCTGCAGAACCTT
CGGCAGAAGCACTTGTGGAAGTGGAGGCACTACAGACTACAGAAGAAGGAAATCGAGGACTTATACA
GCCGGCTTGGGAAACAGCCCCACCTGGTATTGTAGCTCCAGCTGCTATGCTGTCTGCCCCAGCGCCG
CCTCTCGAAGGGCAGCTTCCCACCTCCCGCCGCAACAGCCTGCAGCGCTCTGATCTCCCTGGTCTGGC
ATCATGCAAGGAACTCTCTGAGTGGCAGCAGCACCAGGCTCCAGGAGCAGCGGCAAGCAAGGGGTGA
CATTCCCGGGGATATTGCAGGATGTA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

- Restriction Sites:** Sgfl-Mlul
- ACCN:** NM_175638
- Insert Size:** 3669 bp
- OTI Disclaimer:** Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
- 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]