

## Product datasheet for MC225186

### Wnk1 (NM\_001185020) Mouse Untagged Clone

#### Product data:

|                      |  |
|----------------------|--|
| Product Type:        | Expression Plasmids  |
| Product Name:        | Wnk1 (NM_001185020) Mouse Untagged Clone   |
| Tag:                 | Tag Free   |
| Symbol:              | Wnk1   |
| Synonyms:            | 6430573H23Rik; EG406236; Hsn2; mKIAA0344; Prkwnk1                                  |
| Vector:              | pCMV6-Entry (PS100001)   |
| E. coli Selection:   | Kanamycin (25 ug/mL)   |
| Cell Selection:      | Neomycin   |
| Fully Sequenced ORF: | >MC225186 representing NM_001185020<br>Red=Cloning site Blue=ORF Orange=Stop codon |

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGTCTGACGGTGCCGCGAGAAGCAAAGCGGCACTCCGGGCTTCCTTACGCCTCCGGCGCCCGTCCCCA  
AGAATGGCTCAAGCTCCGATTCTCCGTGGGCGAGAACTGGGGCTACGGTCGCCGACTCGGGAGTTGG  
CAGGACGGAGGAATATCGGCGCCCGCGCACACTATGGACAAGGACAGTCGTGGGGCGGCCGCCACCACC  
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GAAAATACAAAGACAATGAAGCTATTGAGTTTTCTTTGACTTGGAGAGGGATGTACCAGAAGATGTTGC  
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TCAGATGCAGGACAGCCTACCAAGGTGGGACGTTTTCCAGTGACAACCTACAGCCAACAAGTGGGTGCTT  
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CAGAGATTCAGAACAACTGTTATTCCTGCTGTGATACCAAAGAAGGAGAAGCCTGAGCTGGCAGAACCT  
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 CATGAATCTTTCAGGCAGGAGAGGCAGCAAAGGACACATGAATTATGAGGGCCCTGGAATGGCAAGGAAG  
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 CATCTGCTACCTCTCTAGGTCACCTCACCAAATCCATGTGTCCCCACAGCAGTATGGTTTTCCACCTGC  
 CCCATTTGGCACTCAGTGGAGTGGAAACAGGTGGTCCAGCACCGCAGCCACTTGGCCAGTTCCAACCTGTA  
 GGAACAGCATCCTTGCAAATTTCAACATCAGCAATTTGCAGAAGTCCATCAGCAACCCCCAGGTTCCA  
 ATCTACGGACCACCTAG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

- Restriction Sites:** Sgfl-Mlul
- ACCN:** NM\_001185020
- Insert Size:** 6387 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\\_001185020.1](#), [NP\\_001171949.1](#)
- RefSeq Size:** 9828 bp
- RefSeq ORF:** 6387 bp
- Locus ID:** 232341
- UniProt ID:** [P83741](#)
- Cytogenetics:** 6 F1

**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 and SGK1. Controls sodium and chloride ion transport by inhibiting the activity of WNK4, by either phosphorylating the kinase or via an interaction between WNK4 and the autoinhibitory domain of WNK1. WNK4 regulates the activity of the thiazide-sensitive Na-Cl cotransporter, SLC12A3, by phosphorylation. WNK1 may also play a role in actin cytoskeletal reorganization. Phosphorylates NEDD4L. Acts as a scaffold to inhibit SLC4A4, SLC26A6 as well as CFTR activities and surface expression, recruits STK39 which mediates the inhibition (PubMed:21317537, PubMed:23542070).

[UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (2) has multiple differences in the coding region but maintains the reading frame compared to variant 5. The resulting protein (isoform 2) is shorter but has the same N- and C-termini compared to isoform 5.