

## Product datasheet for MR229100

### Nmral1 (NM\_001290761) Mouse Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Nmral1 (NM\_001290761) Mouse Tagged ORF Clone  
**Tag:** Myc-DDK  
**Symbol:** Nmral1  
**Synonyms:** 1110025F24Rik; AI256624  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**ORF Nucleotide Sequence:** >MR229100 representing NM\_001290761  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGGCTGATAGGAACTGGTGGTGGTTTTGGAGCCACAGGTGCGCAAGGTGGCTCTGTGGCCCGTGCAT  
 TGCTAGAAGATGGGACATTCAGGATTCGAGTGGTAACAAGAAACCCTGAGCAGAGGGCAGCCAAAGAGCT  
 GAAGCAGCAAGGTGCTGAGGTAGTGCAGGAGACCAGGACGATGCAGCTAGCATGGAGCTGGCCTTGCT  
 GGAGCCCATGCCACCTTCATTGTGACCAATTACTGGGAGACGTGCAGCCAGGACCGAGAAGTGCAGCAGG  
 GCAAGCTTCTAGCCGATCTAGCCAAACGCTTGGGCCTCCATTATGTAGTGTACAGTGGCCTGGAGAACAT  
 CAGGAAGCTGACGGCTGGGAAGCTGGCCGAGGACACTTTGATGGCAAAGGGGAGGTGGAGGAATACTTC  
 CGAGACATCGGTGTTCCCATGACCAGTGTGCGGCTGCCTTGCTATTTGAGAATCTCCTTTCCTATTTCC  
 TGCCCCAGAAAGCTGCAGATGGAAAAAGCTTCTTGCTGGACTTGCCCATGGGTGACGTCCCCATGGATGG  
 AATGTCTGTGAGTGACCTGGGCCCGTGGTGCTCAGCTTGCTGAAGAAGCCAGAAGAGTACGTAGGGCAG  
 AACATCGGGCTCAGTACCTGCAGGCACACCGCAGAGGAGTATGCTGCCTTGCTTAGCAAGCACACTGGCA  
 AGGCTGTACATCATGCCAAGACAACCTCTGAGGATTACGAGAACTTGGTTTCCAGGGGGCTCAAGACTT  
 GGCCAACATGTTCCGTTTCTACACCCTGAAACCTGATCGGAACATTCATCTGACCCTCGACTCAACCCC  
 AAAGCCAGACTGGACCAGTGGCTGGAGCAGCACAAAGGGGACTTTGCACAGCTG

**ACGCGT**ACGCGGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >MR229100 representing NM\_001290761  
 Red=Cloning site Green=Tags(s)

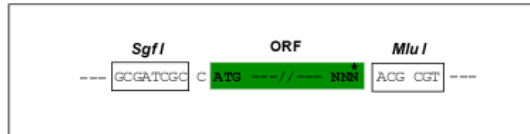
MADRKL VVVF GATGAQGGSVARALLE DGTFRIRVVTRNPEQRAAKELKQQGAEVVRGDQDDAASME LALA  
 GAHATFIVTNYWETCSQDREVQQGKLLADLAKRLGLHYVVYSGL ENIRKLTAGKLAAGHFDGKGEVEEYF  
 RDIGVPMTSVRLPCYFENLLSYFLPQKAADGKSFLLDLPMGDVPM DGMSVSDLGPVVL SLLKKPEEYVVGQ  
 NIGLSTCRHTAEEYAALLSKHTGKAVHHAKTTPEDYEKLGFGQAQDL ANMFRFYTLKPD RNIHLTLRLNP  
 KAQTLDQWLEQHKGDFAQL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_001290761

**ORF Size:** 897 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\\_001290761.1](#), [NP\\_001277690.1](#)

**RefSeq Size:** 1453 bp

**RefSeq ORF:** 900 bp

**Locus ID:** 67824

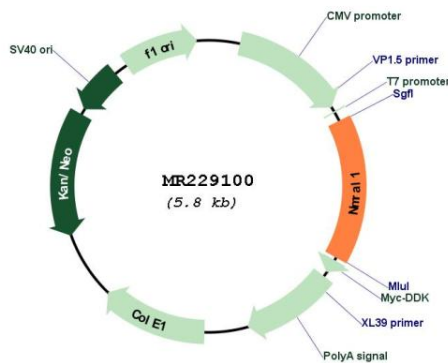
**UniProt ID:** [Q8K2T1](#)

**Cytogenetics:** 16 2.46 cM

**MW:** 33.5 kDa

**Gene Summary:** Redox sensor protein. Undergoes restructuring and subcellular redistribution in response to changes in intracellular NADPH/NADP(+) levels. At low NADPH concentrations the protein is found mainly as a monomer, and binds argininosuccinate synthase (ASS1), the enzyme involved in nitric oxide synthesis. Association with ASS1 impairs its activity and reduces the production of nitric oxide, which subsequently prevents apoptosis. Under normal NADPH concentrations, the protein is found as a dimer and hides the binding site for ASS1. The homodimer binds one molecule of NADPH. Has higher affinity for NADPH than for NADP(+). Binding to NADPH is necessary to form a stable dimer (By similarity).[UniProtKB/Swiss-Prot Function]

### Product images:



Circular map for MR229100