

Product datasheet for **RR209715**

Nos1 (NM_052799) Rat Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Nos1 (NM_052799) Rat Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Nos1
Synonyms:	bNOS
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
ORF Nucleotide Sequence:	>RR209715 representing NM_052799 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGAAGAGAACACGTTTGGGGTTCAGCAGATCCAACCAATGTAATTTCTGTTCTGTTCTTCAAACGCA
AAGTGGGAGTCTGGGCTTCTGGTGAAGGAACGGGTGAGCAAGCTCCCGTGATCATCTCAGACCTGAT
TCGAGGAGGTGCTGCGGAGCAGAGCGGCCCTTATCCAAGCTGGAGACATCATTCTCGCAGTCAACGATCGG
CCCTTGGTAGACCTCAGCTATGACAGTGCCTGGAGGTTCTCAGGGGCATTGCCTCTGAGACCCAGTGG
TCCTCATTCTGAGGGGCCCTGAGGGCTTCACTACACATCTGGAGACCACCTTACAGGGGATGGAACCC
CAAGACATCCGGGTGACCCAGCCCTCGGTCCTCCACCAAAGCCGTCGATCTGTCTCACCAGCCTTCA
GCCAGCAAAGACCAGTCATTAGCAGTAGACAGAGTACAGGTCTGGGTAATGGCCCTCAGCATGCCAAAG
GCCATGGGCAGGGAGCTGGCTCAGTCTCCAAGCTAATGGTGTGGCCATTGACCCACGATGAAAAGCAC
CAAGGCCAACCTCCAGGACATCGGGGAACATGATGAACTGCTCAAAGAGATAGAACCTGTGCTGAGCATC
CTCAACAGTGGGAGCAAAGCCACCAACAGAGGGGACCAGCCAAAGCAGAGATGAAAGACACAGGAATCC
AGGTGGACAGAGACCTCGATGGCAAATCGCACAAGCTCCGCCCTGGGCGGGACAATGACCCGCTCTT
CAATGACCTGTGGGGAAGGACAACGTTCTGTGGTCTTAACAACCCGTTTCAGAGAAGGAACAGTCC
CCTACCTCGGGAAACAGTCTCCACCAAGAACGGCAGCCCTTCCAGGTGCCCCGTTTCTCAAGGTCA
AGAACTGGGAGACGGACGTGGTCTCACGACACCCTGCACCTGAAGAGCACACTGGAAACGGGGTGCAC
AGAGCACATTTGCATGGGCTCGATCATGCTGCCTTCCAGCACACGCGGAAGCCAGAAGATGTCGCACA
AAGGACCAGCTTCCCTTAGCCAAAGAATTTCTCGACCAATACTACTCATCCATTAAGAGATTTGGCT
CCAAGGCCACATGGACAGGCTGGAGGAGTGAACAAGGAGATTGAAAGCACCAGCACCTACCAGCTCAA
GGACCCGAGCTCATCTATGGCCCAAGCATGCCTGGCGGAACGCCTCTCGATGTGTGGCAGGATCCAG
TGTTCCAAGCTGCAGGTGTTGATGCCGAGACTGCACCAGCCACGGCATGTTCAACTACATCTGTA
ACCATGTCAAGTATGCCACCAACAAAGGAATCTCAGGTGCGCCATCACGATATTCCTCAGAGGACTGA
CGGCAAACATGACTTCCGAGTGTGGAATCTGCAGCTCATCCGCTACGCGGGCTACAAGCAGCCAGATGGC
TCTACCTTGGGGATCCAGCCAATGTGCAGTTCACGGAGATCTGTATACAGCAGGGCTGGAAGCCCAA



[View online >](#)

GAGGCCGCTTCGACGTGCTGCCTCTCCTGCTTCAGGCCAATGGCAATGACCCTGAGCTCTTCCAGATCCC
CCCAGAGCTGGTGTGGAAGTGCCCATCAGGCACCCCAAGTTGCGACTGGTTAAGGACCTGGGGCTCAAA
TGGTATGGCCTCCCCGCTGTGTCCAACATGCTGCTGGAGATCGGGGGCCTGGAGTTCAGCGCCTGTCCCT
TCAGCGGCTGGTACATGGGCACAGAGATCGGCGTCCGTGACTACTGTGACAACTCTCGATACAACATCCT
GGAGGAAGTAGCCAAGAAGATGGATTTGGACATGAGGAAGACCTCGTCCCTCTGGAAGGACCAAGCACTG
GTGGAGATCAACATTGCTGTTCTATATAGTTCAGAGTGACAAGGTGACCATCGTTGACCACCCTGTG
CCACGGAGTCTTCATCAAAACACATGGAGAATGAATACCGCTGCAGAGGGGGCTGCCCCGCGACTGGGT
GTGGATTGTGCCTCCCATGTGCGGCAGCATCACCCCTGTCTTCCACCAGGAGATGCTCAACTATAGACTC
ACCCCGTCTTTGAATACCAGCCTGATCCATGGAACACCCACGTGTGGAAGGGCACCAACGGGACCCCA
CGAAGCGGCGAGCTATCGGCTTTAAGAAATTGGCAGAGGCGTCAAGTTCTCAGCCAAGCTAATGGGGCA
GGCCATGGCCAAGAGGGTCAAGGCGACCATTTCTACGCCACAGAGACAGGCAAAACACAAGCCTATGCC
AAGACCCTGTGTGAGATCTTCAAGCACGCCTTCGATGCCAAGGCAATGCCATGGAGGAGTATGACATCG
TGCACCTGGAGCACGAAGCCCTGGTCTTGGTGGTACCAGCACCTTTGGCAATGGAGACCCCTGAGAA
CGGGGAGAAAATTCGGCTGTGCTTTAATGGAGATGAGGCACCCCAACTCTGTGCAGGAGGAGAAAATAC
CGGAACCCCTTGGTTTTCTTTCCCGTAAAGGGCCTTCCCTCTCCCATGTTGACTCTGAAGCCACAGTC
TGGTTGCTGCCCTGACAGCCAACACAGGAGCTACAAGTCCGATTCAACAGCGTCTCCTCTATTCTGA
CTCCCGAAAGTCATCGGGCGACGGACCCGACCTCAGAGACAACTTTGAAGTACTGGACCCTGGCCAAT
GTGAGGTTCTCAGTGTTGCGCTCGGCTCTCGGGCGTACCCCACTTCTGTGCCTTTGGGCATGCGGTGG
ACACCCTCCTGGAGGAACTGGGAGGGGAGAGGATTCTGAAGATGAGGGAGGGGGATGAGCTTTGCGGACA
GGAAGAAGCTTTGAGGACTGGGCAAGAAAGTCTTCAAGGCAGCCTGTGATGTGTTCTGCGTGGGGAT
GACGTCAACATCGAGAAGGCGAACAACCTCCCTATTAGCAATGACCGAAGCTGGAAGAGGAACAAGTTC
GCCTCACGTATGTGGCGAAGCTCCAGATCTGACCCAAGGTCTTCCAATGTTTCAAAAAACGAGTCTC
GCTGCTCGACTCCTCAGCCGCCAAAACCTGCAAAGCCTAAGTCCAGCCGATCGACCATCTTCTGTCGT
CTCCACACCAACGGGAATCAGGAGCTGCAGTACCAGCCAGGGGACACCTGGGTGTCTTCCCGGCAACC
ACGAGGACCTCGTGAATGCACTATTGAACGGCTGGAGGATGCACCGCTGCCAACCACGTGGTGAAGGT
GGAGATGCTGGAGGAGAGGAACACTGCTCTGGGTGTCATCAGTAATTGGAAGGATGAATCTCGCCTCCCA
CCCTGCACCATCTTCCAGGCCTTCAAGTACTACCTGGACATCACACGCGCCACGCCCCTGCAGCTGC
AGCAGTTCGCCTCTTGGCCACTAATGAGAAAGAGAAGCAGCGGTTGCTGGTCTCAGCAAGGGCTCCA
GGAATATGAGGAGTGAAGTGGGGCAAGAACCCACAATGGTGGAGGTGCTGGAGGATTCCTGTCATC
CAGATGCCGGCTACACTTCTCCTCACTCAGCTGTGCTGCTGCAGCCTCGCTACTACTCCATCAGCTCCT
CTCCAGACATGTACCCCGACGAGGTGCACCTCACTGTGGCCATCGTCTCCTACCACACCCGAGACGGAGA
AGGACCAGTCCACCACGGGGTGTGCTCCTCGCTCAACAGAATACAGGCTGACGATGTAGTCCCTGCTC
TTCGTGAGAGGTGCCCTAGCTTCCACCTGCCTCGAAACCCCAAGGTGCCTTGCATCCTGTTGGCCAG
GCACTGGCATCGCACCTTCCGAAGCTTCTGGCAACAGCGACAATTTGACATCCAACACAAGGAATGAA
TCCGTGCCCATGTTTCTGGTCTTCCGGTGTGCAATCCAAGATAGATCATATCTACAGAGAGGAGACC
CTGCAGGCCAAGAACAAGGGCTTTCAGAGAGCTGTACTGTCTATTCCCGGGAACCGGACAGGCCAA
AGAAATATGTACAGGACGTGCTGCAGGAACAGCTGGCTGAGTCTGTGTACCGGCCCTGAAGGAGCAAGG
AGGCCACATTTATGTCTGTGGGACGTTACCATGGCCCGCATGCTCTCAAAGCCATCCAGCGCATAATG
ACCCAGCAGGGGAAACTCTCAGAGGAGGACGCTGGTGTATTATCAGCAGGCTGAGGGATGACAACCGGT
ACCACGAGGACATCTTTGGAGTACCCTCAGAAGTATGAAGTGACCAACCGCCTTAGATCTGAGTCCAT
CGCCTTATCGAAGAGAGCAAAAAAGACGAGATGAGGTTTTTCAGCTCC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTAA

Protein Sequence: >RR209715 representing NM_052799
 Red=Cloning site Green=Tags(s)

```
MEENTFGVQQIQPNVISVRLFKRKVGGGLFLVKERVSKPPVVIISDLIRGGAAEQSGLIQAGDIILAVNDR
PLVDLSYDSALEVLRGIASETHVVLILRGPEGFTTHLETTFTGDGTPKTRVTPQLGPPTKAVDLHQPS
ASKDQSLAVDRVTGLNGPQHAQGHGQAGSVSQANGVAIDPTMKSTKANLQDIGEHDELLKEIEPVLISI
LNSGSKATNRGGPAKAEKDTGIQVDRDLDGKSHKAPPLGGDNDRVFNDLWGKDNVPVLLNNPYSEKEQS
PTSGKQSPTKNGSPSRCPRFLKVKNWETDVVLTDTLHLKSTLETGCTEHCMSIMLPSQHKRPEDVRT
KDQLFPLAKEFLDQYYSIKRFGSKAHMDRLEEENKEIESTSTYQLKDELIYGAKHAWRNASRCVGRIO
WSKLQVFDARDCTTAHGMFNYICNHVYATNKGNLRSAITIFPQRTDGKHDFRVWNSQLIRYAGYKQPDG
STLGD PANVQFTEICIQGWKAPRGRFDVPLLLLQANGNPELFIQPELVLEVP IRHPKDFWFDLGLK
WYGLPAVSNM LLEIGGLEFSACPFSGWYMGTEIGVRDYCDNSRYNILEEVAKKMDLDMRKTSSLWKDQAL
VEINI AVL YSFQSDKVTIVDHSATESFIKHMENEYRCGGCPADWVWIVPPMSGSI TPVFHQEMLNYRL
TPSFEYQDPWNTHVWKG TNGTPTKRAIGFKLAEAVKFSAKLMGQAMAKRVKATILYATETGKSQAYA
KTLCEIFKHAFDAKAMS E EYDIVHLEHEALVLVVTSTFGNGDPPENGEKFGCALMEMRHPSVQEERKY
PEPLRFFPRKGPSLSHVDSEAHSLVAARDSQHRSYKVRFNSVSSYSDRKSSGDPDLRDNFESTGPLAN
VRF SVFGLGSRAYPHFCAFGHAVDTLLEELGGERILKMREGDEL CGQEEAFRTWAKKVFAACDVCVGD
DVNIEKANNSLISNDRSWKRNFRLTYVAEAPDLTQGLSNVHKRVSAARLLSRQNLQSPKSSRSTIFVR
LHTNGNQELQYQPGDHLGVFPGNHEDLVNALIERLEDAPPANHVKVEMLEERNTALGVISNWKDESRLP
PCTIFQAFKYLDITTPPTPLQLQFASLATNEKEKQRLVLVSKGLQEYEEWKWGNPTMVEVLEEFPSI
QMPATLLLTLQLSLLQPRYYISSSPDMYPDEVHLTVAI VSYHTRDGE GPVHHGVCSSWLNR IQADDVVPC
FVRGAPSFHLPRNPQVPCILVPGGTGIAPFRSFQQRFDIQHKGMNCPMVLFVGCQRQSKIDHIYREET
LQAKNKGVFREL YTVYSREPRPKKYVDVLQEQLAESVYRALKEQGGHIYVCGDVTMAADV LKAIQRIM
TQQGKLSEEDAGVFI SRLRDDNR YHEDIFGVTLRTYEVTNRLRSESI AFIEE SKKDADEVFSS
```

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

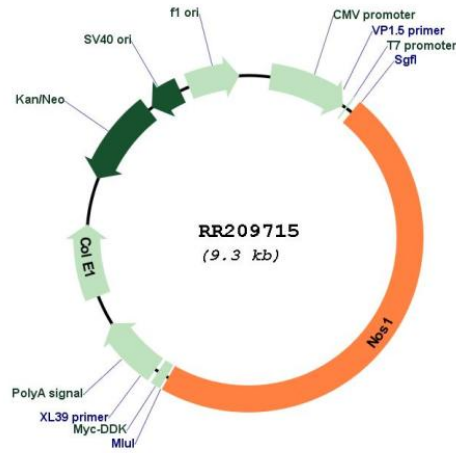
Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

Plasmid Map:



ACCN: NM_052799

ORF Size: 4389 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_052799.1](#), [NP_434686.1](#)

RefSeq Size: 4592 bp

RefSeq ORF: 4392 bp

Locus ID: 24598

UniProt ID: [P29476](#)

Cytogenetics: 12q16

MW: 164.4 kDa

Gene Summary: enzyme that catalyzes the production of nitric oxide [RGD, Feb 2006]