

Product datasheet for RC233200

NOS1 (NM_001204214) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: NOS1 (NM_001204214) Human Tagged ORF Clone
Tag: Myc-DDK
Symbol: NOS1
Synonyms: bNOS; IHPS1; N-NOS; NC-NOS; nNOS; NOS
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Cell Selection: Neomycin
ORF Nucleotide Sequence: >RC233200 representing NM_001204214
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGGCTCCATCATGCATCCTTCTCAGCATGCAAGGAGGCTGAAGACGTCGGCACAAAAGGACAGCTCT
TCCCTCTCGCAAAGAGTTTATTGATCAATACTATTTCATCAATAAAAGATTTGGCTCAAAGCCCACAT
GGAAAGGCTGGAAGAGGTGAACAAGAGATCGACACCACTAGCACTTACCAGCTCAAGGACACAGAGCTC
ATCTATGGGGCCAAGCACGCCTGGCGGAATGCCTCGCGCTGTGTGGGCAGGATCCAGTGGTCCAAGCTGC
AGGTATTCGATGCCCGTACTGCACCACGGCCACGGGATGTTCAACTACATCTGTAACCATGTCAAAGTA
TGCCACCAACAAAGGGAACCTCAGGTCTGCCATCACCATATCCCCAGAGGACAGACGGCAAGCAGCAGC
TTCCGAGTCTGGAACCTCCAGCTCATCCGCTACGCTGGCTACAAGCAGCCTGACGGCTCCACCCTGGGGG
ACCCAGCCAATGTGCAGTTCACAGAGATATGCATACAGCAGGGCTGGAACCCGCTAGAGGCCGCTTCGA
TGTCTGCCGCTCCTGCTCAGGCCAACGGCAATGACCTGAGCTCTCCAGATTCCTCCAGAGCTGGTG
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CATGGGCACAGAGATTGGTGTCCGCGACTACTGTGACAACCTCCGCTACAATATCCTGGAGGAAGTGCC
AAGAAGATGAACTTAGACATGAGGAAGACGTCCTCCCTGTGGAAGGACCGGCTGGTGGAGATCAATA
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AATACCAGCCTGATCCCTGGAACACGCATGTCTGGAAAGGCACCAACGGGACCCCAAAAGCGGCGAGC
CATTGGCTTCAAGAAGCTAGCAGAAGCTGTCAAGTTCTCGCCAAGCTGATGGGGCAGGCTATGGCCAAG
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GGCTGTGCTTGTGAAATGAGGCACCCCAACTCTGTGCAGGAAGAAAGGAGCTACAAGTCCGAT



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TCAACAGCGTCTCCTCTACTCTGACTCCCAAAAATCATCAGGCGATGGGCCCGACCTCAGAGACAACT
 TGAGAGTCTGGACCCCTGGCCAATGTGAGGTTCTCAGTTTTGGCCTCGGCTCACGAGCATACCCTCAC
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 TTTCTACCGCACTCGAGATGGAGAAGGACCAATTCACCACGGCGTATGCTCCTCCTGGTCAACCGGAT
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ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC233200 representing NM_001204214
 Red=Cloning site Green=Tags(s)

MGSIMHPSQHARRPEDVVRTKQLFPLAKEFIDQYSSIKRFGSKAHMERLEEVENKEIDTTSTYQLKDEL
 IYGAKHAWRNASRCVGRIQWKLQVFDARDCTTAHGFMFNYICNHVKYATNKGNLRSAITIFPQRTDGKHD
 FRVWNSQLIRYAGYKQPDGSLGDPANVQFTEICIQGWKPPRGRFDVLP LLLQANGNDPELFIQIPPELV
 LEVPIRHPKFEWFKDLGLKWYGLPAVSNMLLEIGGLEFSACPFSGWYMGTEIGVRDYCDNSRYNILEEVA
 KKMNLDMRKTSSLWKDQALVEINIAVLYSFQSDKVTIVDHHSESFIKHMENEYRCRGGCPADWWIWP
 PMSGSITPVFHQEMLNRYLTPSFEYQDPWNTHVWKGNTGTPTKRRAIGFKLAEAVKFSAKLMGQAMAK
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 GCALMEMRHPNSVQEERKSYKVRFNVSYSYSDSQSSGDGPDLDNFESAGPLANVRFVFLGSRAYPH
 FCAFGHAVDTLLEELGGERILKMRGDELGQEEAFRTWAKKVFKAACDVFVCGDDVNIEKANNSLISND
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 HLGVFPGNHEDLVNALIERLEDAPPVNMVKVELLEERNTALGVISNWTDELRLPPCTIFQAFKYLDIT
 TPPTPLQLQQFASLATSEKEKQRLVLVSKGLQEYEEWKWGNPTIVEVLEEFPSIQMPATLLLTLQLSLQ
 PRYYSISSPDMYPDEVHITVAIVSYRTRDGEPIHHGVCSSWLNRIQADELVPCFVRGAPSFHLPRNPQ
 VPCILVPGTGIAPFRSFQQRQFDIQHKGMPNCPMVLVFGCRQSKIDHIYREETLQAKNKGVFRELYTA
 YSREPKPKKYVQDILQEQLAESVYRALKEQGGHIYVCGDVTMAADVLKAIQRIMTQQGKLSAEDAGVFI
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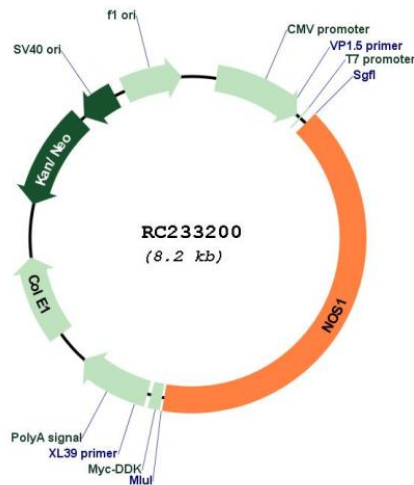
Restriction Sites:

Sgfl-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_001204214

ORF Size: 3294 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:	<ol style="list-style-type: none">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:	<u>NM_001204214.1, NP_001191143.1</u>
RefSeq Size:	10776 bp
RefSeq ORF:	3297 bp
Locus ID:	4842
UniProt ID:	<u>P29475</u>
Cytogenetics:	12q24.22
Protein Families:	Druggable Genome
Protein Pathways:	Alzheimer's disease, Amyotrophic lateral sclerosis (ALS), Arginine and proline metabolism, Calcium signaling pathway, Long-term depression, Metabolic pathways, Pathways in cancer, Small cell lung cancer
MW:	125.6 kDa
Gene Summary:	The protein encoded by this gene belongs to the family of nitric oxide synthases, which synthesize nitric oxide from L-arginine. Nitric oxide is a reactive free radical, which acts as a biologic mediator in several processes, including neurotransmission, and antimicrobial and antitumoral activities. In the brain and peripheral nervous system, nitric oxide displays many properties of a neurotransmitter, and has been implicated in neurotoxicity associated with stroke and neurodegenerative diseases, neural regulation of smooth muscle, including peristalsis, and penile erection. This protein is ubiquitously expressed, with high level of expression in skeletal muscle. Multiple transcript variants that differ in the 5' UTR have been described for this gene but the full-length nature of these transcripts is not known. Additionally, alternatively spliced transcript variants encoding different isoforms (some testis-specific) have been found for this gene.[provided by RefSeq, Feb 2011]