

Product datasheet for **SC300111**

iNOS (NOS2) (NM_000625) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	iNOS (NOS2) (NM_000625) Human Untagged Clone
Tag:	Tag Free
Symbol:	iNOS
Synonyms:	HEP-NOS; INOS; NOS; NOS2A
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)

Fully Sequenced ORF: >OriGene sequence for NM_000625 edited
 CAGAAGCTCCTGTTTGTCCCGGCTTGAAGCTGTTTGTGTGACCTTGCCCCACAGTGA
 AGAACATCTGAGCTCAAATCCAGATAAGTGACATAAGTGACCTGCTTTGTAAGCCATAG
 AGATGGCCTGTCCCTTGGAAATTTCTGTTCAAGACCAAATTCACCAAGTATGCAATGAATG
 GGGAAAAAGACATCAACAACAATGTGGAGAAAGCCCCCTGTGCCACCTCCAGTCCAGTGA
 CACAGGATGACCTTCAGTATCACAACTCAGCAAGCAGCAGAATGAGTCCCCGACGCCCC
 TCGTGGAGACGGGAAAGAAGTCTCCAGAATCTCTGGTCAAGCTGGATGCAACCCATTGT
 CCTCCCCACGGCATGTGAGGATCAAAAAGTGGGGCAGCGGGATGACTTTCCAAGACACAC
 TTCACCATAAGGCCAAAGGGATTTAACTTGCAGGTCAAATCTTGCCTGGGGTCCATTA
 TGACTCCCAAAAGTTTGACCAGAGGACCCAGGGACAAGCCTACCCCTCCAGATGAGCTTC
 TACCTCAAGCTATCGAATTTGTCAACAAATATTACGGCTCCTTCAAAGAGGCAAAAATAG
 AGGAACATCTGGCCAGGGTGAAGCGGTAACAAAGGAGATAGAAACAACAGGAACCTACC
 AACTGACGGGAGATGAGCTCATCTTCGCCACCAAGCAGGCTGGCGCAATGCCCCACGCT
 GCATTGGGAGGATCCAGTGGTCCAACCTGCAGGTCTTCGATGCCCGCAGCTGTTCCACTG
 CCCGGGAAATGTTTGAACACATCTGCAGACACGTGCGTACTCCACCAACAATGGCAACA
 TCAGGTGCGCCATCACCGTGTCCCCACGCGGAGTGATGGCAAGCAGACTTCCGGGTGT
 GGAATGCTCAGCTCATCCGCTATGCTGGCTACCAGATGCCAGATGGCAGCATCAGAGGGG
 ACCCTGCCAACGTGGAATCACTCAGCTGTGCATCGACCTGGGCTGGAAGCCCAAGTACG
 GCCGCTTCGATGTGGTCCCCCTGGTCTGCAGGCCAATGGCCGTGACCCCTGAGCTTTCCG
 AAATCCCACCTGACCTTGTGCTTGAGGTGGCCATGGAACATCCCAAATACGAGTGGTTTC
 GGGAACTGGAGCTAAAGTGGTACGCCCTGCCTGCAGTGGCCAACATGCTGCTTGAGGTGG
 GCGGCCTGGAGTCCCAGGGTGGCCCTTCAATGGCTGGTACATGGGCACAGAGATCGGAG
 TCCGGGACTTCTGTGACGTCCAGCGCTACAACATCCTGGAGGAAGTGGCAGGAGAATGG
 GCCTGGAAACGCACAAGCTGGCCTCGCTCTGGAAAGACCAGGCTGTCGTTGAGATCAACA
 TTGCTGTGCTCCATAGTTTCCAGAAGCAGAATGTGACCATCATGGACCACCACTCGGCTG
 CAGAATCCTTCATGAAGTACATGCAGAATGAATACCGGTCCCGTGGGGGCTGCCCGCAG
 ACTGGATTGGCTGGTCCCTCCCATGTCTGGGAGCATCACCCCGTGTTCACCAGGAGA



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TGCTGAACTACGTCTGTCCCCTTTCTACTACTATCAGGTAGAGGCTGGAAAACCCATG
 TCTGGCAGGACGAGAAGCGGAGACCCAAGAGAAGAGAGATTCCATTGAAAGTCTTGGTCA
 AAGCTGTGCTCTTTGCCTGTATGCTGATGCGCAAGACAATGGCGTCCCGAGTCAGAGTCA
 CCATCCTCTTTGCGACAGAGACAGGAAAATCAGAGGCGCTGGCCTGGGACCTGGGGGCT
 TATTACAGTGTGCCTTCAACCCCAAGGTTGTCTGCATGGATAAGTACAGGCTGAGCTGCC
 TGGAGGAGGAACGGCTGCTGTTGGTGACCAAGTACGTTTGGCAATGGAGACTGCCCTG
 GCAATGGAGAGAAAATGAAGAAATCGCTCTTTCATGCTGAAAAGAGCTCAACAACAATTC
 GGTACGCTGTGTTTGGCCTCGGCTCCAGCATGTACCCTCGGTTCTGCGCCTTTGCTCATG
 ACATTGATCAGAAGCTGTCCCACCTGGGGGCTCTCAGCTCACCCCGATGGGAGAAGGGG
 ATGAGCTCAGTGGCAGGAGGACGCCTTCCGAGCTGGGCGTGCAAACCTTCAAGGCAG
 CCTGTGAGACGTTTGTGTCGAGGCAAACAGCACATTAGATCCCAAGCTCTACACCT
 CCAATGTGACCTGGGACCCGCACCACTACAGGCTCGTGCAGGACTCACAGCCTTTGGACC
 TCAGCAAAGCCCTCAGCAGCATGCATGCCAAGAAGCTGTTACCATGAGGCTCAAATCTC
 GGCAGAATCTACAAAGTCCGACATCCAGCCGTGCCACCATCCTGGTGAACTCTCCTGTG
 AGGATGGCCAAGGCTGAACTACCTGCCGGGGAGCACCTTGGGGTTTCCCAGGCAACC
 AGCCGGCCCTGGTCCAAGGTATCCTGGAGCGAGTGGTGGATGGCCCCACACCCACCAGA
 CAGTGGCCTGGAGGCCCTGGATGAGAGTGGCAGCTACTGGGTGAGTACAAGAGGCTGC
 CCCCCTGCTCACTCAGCCAGGCCCTCACCTACTTCTGGACATCACACACCCCAACCC
 AGCTGTGCTCCAAAAGCTGGCCAGGTGGCCACAGAAGAGCCTGAGAGACAGAGGCTGG
 AGGCCCTGTGCCAGCCCTCAGAGTACAGCAAGTGAAGTTCAACAACAGCCCAACATTCC
 TGGAGGTGCTAGAGGAGTTCCCGTCCCTGCGGGTGTCTGCTGGCTTCTGCTTTCCCAGC
 TCCCCATTCTGAAGCCAGGTTCTACTCCATCAGCTCCTCCCGGATCACATGCCACAG
 AGATCCACCTGACTGTGGCCGTGGTCACTACCACACCCGAGATGGCCAGGGTCCCCTGC
 ACCACGGCGTCTGCAGCACATGGCTCAACAGCCTGAAGCCCAAGACCCAGTGCCTGCT
 TTGTGCGGAATGCCAGCGCTTCCACCTCCCGAGGATCCCTCCATCCTTGCATCCTCA
 TCGGGCTGGCACAGGCATCGCGCCCTTCCGAGTTTCTGGCAGCAACGGCTCCATGACT
 CCCAGCACAAAGGAGTGCGGGGAGGCCGATGACCTTGGTGTGGGTGCCGCGCCAG
 ATGAGGACCACATCTACCAGGAGGAGATGCTGGAGATGGCCAGAAGGGGGTGTGCATG
 CGGTGCACACAGCCTATCCCGCTGCCTGGCAAGCCCAAGGTCTATGTTGAGGACATCC
 TGCGGCAGCAGCTGGCCAGCGAGGTGCTCCGTGTGCTCCACAAGGAGCCAGGCCACCTCT
 ATGTTTGCGGGATGTGCGCATGGCCCGGACGTGGCCACACCCCTGAAGCAGCTGGTGG
 CTGCCAAGCTGAAATTGAATGAGGAGCAGGTCGAGGACTATTTCTTTCAGCTCAAGAGCC
 AGAAGCGCTATCACGAAGATATCTTTGGTGTGATTTCTTACGAGGCGAAGAAGGACA
 GGGTGGCGGTGCAGCCCAGCAGCCTGGAGATGTCAGCGCTCTGAGGGCTACAGGAGGGG
 TTAAGCTGCCGGCACAGAACTTAAGGATGGAGCCAGCTCTGCATTATCTGAGGTACAG
 GGCCTGGGGAGATGGAGGAAAGTGATATCCCCAGCCTCAAGTCTTATTTCTCAACGTT
 GCTCCCATCAAGCCCTTACTTGACCTCTAACAAGTAGCACCTGGATTGATCGGAGC
 CTCTCTCTCAAAGTGGGGCTCCCTGGTCCCTGGAGACAAAATCTTAAATGCCAGGCC
 TGGCAAGTGGGTGAAAGATGGAACCTGCTGCTGAGTGCACCACTCAAGTGACCACAGG
 AGGTGCTATCGCACCACTGTGTATTTAACTGCCTTGTGTACAGTTATTTATGCCTCTGTA
 TTTAAAAAACTAACACCCAGTCTGTTCCCATGGCCACTTGGGTCTTCCCTGTATGATTC
 CTTGATGGAGATATTTACATGAATTGCATTTTACTTTAATCACAAAAA

A

5' Read Nucleotide Sequence:

```
>OriGene 5' read for NM_000625 unedited
GGGGAGGATCTGCCATTTTGTATACNACTCACTATTAGGGCGGCCGCGTAATTCGCACGA
CANAACCTCTGTTTGTCCCGGCTTGAAGCTGTTTGTGTGTGACCTTGCCCCACAGTGAA
GAACATCTGAGCTCAAATCCAGATAAGTGACATAAGTGACCTGCTTTGTAAGCCATAGA
GATGGCCTGTCTTGGAAATTTCTGTTCAAGACCAAATCCACCAGTATGCAATGAATGG
GGAAAAAGACATCAACAACAATGTGGAGAAAGCCCCCTGTGCCACCTCCAGTCCAGTGAC
ACAGGATGACCTTCAGTATCACAACTCAGCAAGCAGCAGAATGAGTCCCCGACGCCCT
CGTGGAGACGGGAAAGAAGTCTCCAGAATCTCTGGTCAAGCTGGATGCAACCCCATTGTC
CTCCCCACGGCATGTGAGGATCAAAAACTGGGGCAGCGGGATGACTTTCCAAGACACACT
TCACCATAAGGCCAAAGGGATTTTAACTTGCAGGTCCAAATCTTGCCTGGGGTCCATTAT
GACTCCAAAAGTTTGACCAGAGGACCCAGGGACAAGCCTACNCCTCCAGATGAGCTTCT
ACCTCAAGCTATCGAATTTGTCAACAAATATTACGGCTCCTTCAAAGAGGCAAAAATAGA
GGAACATCTGGCCAGGGTGGAAAGCGTAACCAAGGAGATAGAAACAACGGAACCTACCC
ACTGACGGGAGATGAGCTCATCTTCGCCACCAAGCAGGCCTGGCGCAATGCCCCACGCTG
CATTGGGAGGATCCAGTGGGTCCACCCTGCAGTCTCCGATGCCCCAGCTGTTCCACTGTC
CGGGAAATGTTTGAACCTTTGCCGACACTGCGTTACTCCCCAACCATGGCAACTTCAGT
CCGGCCTT
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3' Read Nucleotide Sequence:

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>OriGene 3' read for NM_000625 unedited
NGCCCCATTGGGNNGATGGCAACTTNCAGGTCCAGNAAAGCACTGGGGNAGGGTCACA
GGNATGCCACCCGGGCTCTGTTCAGGAAACAGCTATGACCGCGGCCGAATCTAGAGTCG
AGTTTTTTTTTTTTTTTTTTGTGATTAAGTAAAATGCAATTCATGTAATATCTCCATC
AAGGAATCATACAGGGGAAGACCCAAGTGGCCATGGGGAACAGACTGGGTGTTAGTTTTT
TAAATACAGAGGCATAAATAACTGTACACAAGGCAGTTAATACACAGTGGTGCGATAGC
ACCTCCTGGTGGTCACTTGAAGTGGTGCCTCAGCAGCAAGTTCATCTTTCACCCACTT
GCCAGGCCTGGCATTAAAGATTTTGTCTCAAGGACCAGGGAGGCCCCAGTTTGAGAGA
GGAGGCTCCGATCAATCCAGGGTCTACTTGTAGGAGGTCAAGTAAAGGGCTTGATGGG
GAGCAACGTTGAGGAAATAGACTTGGAGCTGGGGGATATCACTTTCCTCCATCTCCCCA
GGCCCTGTGACCTCAGATAATGCAGAGCTGGCTCCATCCTTAAGTTCTGTGCCCGCAGCT
TTAACCCCTCCTGTANGCCCTCAGAGCGCTGACATCTCCAGGCTGCTGGGCTGCACCGNC
ACCCTGTCCTTCTTCGCCTCGTAAGGAAATACAGCACCAAAGATATCTTCGTGATAGCGC
TCCTGGCTCTTGGACTGAAAGAAATAGTCTCGACCTGCTCCTCATTTCAGCTTGG
CAGCCACCAGCTGCTTCAAGGGTGTGGGCCACGTTCCGGGCCATGCCACCATCCCGGAA
AACATAGAAGTTGCCTGGCTTCTTGTGGAACACAAGGACCACTTGCTTGGCCACTGCTGC
CGAAGGAAGTCTGAAACTAAACCTGGN
```

Restriction Sites:

NotI-NotI

ACCN:

NM_000625

Insert Size:

4100 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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: There is 2 nucleotide difference between the OriGene clone and the NCBI reference ORF. These result in the substitution of 2 aa.

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_000625.3](#), [NP_000616.3](#)

RefSeq Size: 4221 bp

RefSeq ORF: 3462 bp

Locus ID: 4843

UniProt ID: [P35228](#)

Cytogenetics: 17q11.2

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

Gene Summary: Nitric oxide is a reactive free radical which acts as a biologic mediator in several processes, including neurotransmission and antimicrobial and antitumoral activities. This gene encodes a nitric oxide synthase which is expressed in liver and is inducible by a combination of lipopolysaccharide and certain cytokines. Three related pseudogenes are located within the Smith-Magenis syndrome region on chromosome 17. [provided by RefSeq, Jul 2008]