

Product datasheet for **SC310253**

NADPH oxidase 4 (NOX4) (NM_016931) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	NADPH oxidase 4 (NOX4) (NM_016931) Human Untagged Clone
Tag:	Tag Free
Symbol:	NADPH oxidase 4
Synonyms:	KOX; KOX-1; RENOX
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF:

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>OriGene sequence for NM_016931 edited
CCGCTGCCCGGCGCCGCCCGCTCCTTCTCGGTCCGGCGGGCACAGAGCGCAGCGCGGC
GGGGCCGGCG GCATGGCTGTGCTCTGGAGGAGCTGGCTCGCCAACGAAGGGTTAAACA
CCTCTGCCTGTTTCATCTGGCT CTCCATGAATGTCCTGCTTTTCTGAAAACTTCTTGC
TGTATAACCAAGGGCCAGAGTATCACTACCTC CACCAGATGTTGGGGCTAGGATTGTGT
CTAAGCAGAGCCTCAGCATCTGTTCTTAACTCAACTGCAGCC TTATCCTTTTACCCTA
GTGCCGAACACTTTGGCTTACCTCCGAGGATCACAGAAGTTCCAAGCAGGAG AACCA
GGAGATTGTTGGATAAAAAGCAGAACATTCCATATTACCTGTGGTGTACTATCTGTATTT
TCTCA GCGTGCATGTGGCTGCCATCTGGTGAATGCCCTCAACTTCTCAGTGAATTAC
AGTGAAGACTTTGTTG AACTGAATGCAGCAAGATACCGAGATGAGGATCCTAGAAAACT
TCTCTTCAACTGTTTCTGGCCTGAC AGGGGTCTGCATGGTGGTGGTCTATTCTCTCA
TGATCACAGCCTCTACATATGCAATAAGAGTTTCTAAC TATGATATCTTCTGGTATACT
CATAACCTCTTCTTGTCTTCTACATGCTGCTGACGTTGCATGTTTCAG GAGGGCTGCT
GAAGTATCAAATAATTTAGATACCCACCCTCCGGCTGCATCAGTCTTAACCGAACCG
CTCTCAGAAATTTTCTTACCAGAGATTTCTCAGAACATTTTCATGAACCTTTCCCTG
AAGGATTTTCA AAACCGCAGAGTTTACCCAGCACAAATTTGTGAAGATTTGTATGGAA
GAGCCCAGATTCCAAGCTAATT TTCCACAGACTTGGCTTTGGATTTCTGGACCTTTGTG
CCTGTAAGTGTGCCGAAAGACTTTACAGGTATAT CCGGAGCAATAAGCCAGTCACCATCA
TTTCGGTCATAAGTCAATCCCTCAGATGTCATGGAAATCCGAATG GTCAAAGAAAATTT
AAAGCAAGACCTGGTCAGTATATTACTCTACATTGTCCCAGTGTATCTGCATTAG AAAA
TCATCCATTTACCCTCACAATGTGTCCAAGTAAACCAAGCAACATTTGGGGTTCATCT
TAAAAT AGTAGGAGACTGGACAGAACGATTTGAGATTTACTACTGCCTCCATCTAGTC
AAGACTCCGAAATCTG CCCTTCATTCAATCTAGAAATTTCCCAAGCTGTATATTGAT
GGTCTTTTGGAAAGTCCATTTGAGGAAT CACTGAACTATGAGGTCAGCCTCTGCGTGGC
TGGAGGCATTGGAGTAACTCCATTTGCATCAATACTCAA CACCCTGTTGGATGACTGGA
AACCATACAAGCTTAGAAGACTATACTTTATTTGGGTATGCAGAGATATC CAGTCTTC
CGTTGGTTTGCAGATTTACTCTGTATGTTGCATAACAAGTTTTGGCAAGAGAACAGACCT
G ACTATGTCAACATCCAGCTGTACCTCAGTCAAACAGATGGGATACAGAAGATAATTGG
AGAAAAATATCA TGCACTGAATTCAAGACTGTTTATAGGACGTCCTCGGTGGAACTTT
TGTTTGATGAAATAGCAAAATAT AACAGAGGAAAAACAGTTGGTGTCTTCTGTTGTGGA
CCCAATTCATATCCAAGACTCTTCATAAACTGA GTAACCAGAACAACTCATATGGGAC
AAGATTTGAATACAATAAAGAGTCTTTCAGCTGAAAACCTTTTGCC ATGAAGCAGGACTC
TAAAGAAGGAATGAGTGAATTTCTAAGACTTTGAAACTCAGCGGAATCAATCAGC TGT
GTTATGCCAAAGAATAGTAAGGTTTTCTTATTTATGATTATTTAAATGGAAATGTGAGA
ATGTGGC AAGATGACCGTCACATTACATGTTTAACTGGAACCAAGAGACCCCTGAAG
AATATTTGATGTGATGAT TCACTTTTCAGTTCTCAAATTTAAAGAAAAGTGTAGATGC
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
  
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5' Read Nucleotide Sequence:

>OriGene 5' read for NM_016931 unedited
 NNGGGTTCAAATTTGTATACGACTCACTATAGGCGGCCGGAATTCATCTGGTACCGGT
 CCGGAATCCCGGGATCCGCTGCCCCGGCCGCCCGCTCCTTCTCGGTCCGGCGGGCA
 CAGAGCGCAGCGCGGGCGGGCCGGCGGCATGGCTGTGTCTGGAGGAGCTGGCTCGCCAA
 CGAAGGGGTTAAACACCTCTGCCTGTTCATCTGGCTCTCCATGAATGTCTGCTTTTCTG
 GAAAACCTTCTTGCTGTATAACCAAGGGCCAGAGTATCACTACCTCCACCAGATGTTGGG
 GCTAGGATTGTGCTAAGCAGAGCCTCAGCATCTGTTCTTAACCTCAACTGCAGCCTTAT
 CCTTTTACCCATGTGCCGAACACTCTTGGCTTACCTCCGAGGATCACAGAAGTTCCAAG
 CAGGAGAACCAGGAGATTGTTGGATAAAAAGCAGAACATTCATATTACCTGTGGTGTAC
 TATCTGTATTTTCTCAGGCGTGCATGTGGCTGCCCATCTGGTGAATGCCCTCAACTTCTC
 AGTGAATTACAGTGAAGACTTTGTTGAACTGAATGCAGCAAGATACCGAGATGAGGATCC
 TAGAAAACCTTCTTTCACAACTGTTCTGGCCTGACAGGGGTCTGCATGGTGGTGGTGTCT
 ATCTCTCATGATCACAGCCTCTACATATGCAATAAGAGTTTCTAACTATGATATCTTCTG
 GTATACTATAACCTTCTTTTGTCTTCTACATGCTGCTGACGTTGCATGTTTCANGAGG
 GCTGCTGAAGTATCAAATAATTTAGATACCCACCTCCCGGCTGCATCAGTCTTAACCG
 AACCAGCTCTCAGATATTTCTTACCAGAGTATTTCTCAGAACATTTTCATGAACCTT

3' Read Nucleotide Sequence:

>OriGene 3' read for NM_016931 unedited
 AAGAGCAATGGGGAGGGTCAAGGNNTAGCACCGGGTATGTTTCAGAAAAGCTATGACCGC
 GGCCGCCCTTGCATTAACAGTTNN
 TTCTTTTTAATTTGAGAAGTAAAAGTGAATCATCACATCAAATATTCTTCAGGGTCTCT
 TTGGTTCCAGATTAACATGTAATGTGACGGTATCTTGCCACATTCTCACATTTCCAT
 TTTAAATAATCATAAATAAGAAAACCTTACTATTCTTTGGCATAACACAGCTGATTGATT
 CCGCTGAGTTTCAAAGTCTTAGAAATTGCACTATTCCTTCTTTAGAGTCTGCTTCATG
 GCAAAAAGTTTTAGCTGAAAGACTCTTTATTGTATTCAAATCTTGTCCCATATGAGTTGT
 TCTGGTACTCAGTTTATGAAGAGTCTGNATAGTGAATTTGGGTCACACAGAAACACC
 AACTGGTTTTCTCTGTTATATTTGCTATTTTCATCAAACAAAAGTTCCACCCAGAAC
 TCCATTAACAGTCTTTGAATTCGTGCCTGAATTTTTTTTTTCCATTATCTTTTTGTTTTCC
 CATCTGTTTTAACTGAAGGTACCCTGGGTTTTTGAACCTAATCCGGGTTTTGTTTTCTT
 TGCCAAACTTTGTTTTTGGCAACATCAACGAGTTAAATCCGGCAACACCACCGGGAGGGC
 TTGGGTTTTTTCTTGCTTTCCCCCAAAAAAAGTTAATCTTTTTCAAACCTGTTGGGGG
 TTTCCAGTTCACCCACGGGGTTGTTGAGTTTTTTGTGGCCAAAGGGGTTTTTTCC
 CAAGGGCCCTCCCCCCCCCAGAGTTG

Restriction Sites:

NotI-NotI

ACCN:

NM_016931

Insert Size:

2100 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: The open reading frame of this TrueClone was fully sequenced and found to be a perfect match to the protein associated to this reference.

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_016931.2](#), [NP_058627.1](#)

RefSeq Size: 2416 bp

RefSeq ORF: 1737 bp

Locus ID: 50507

UniProt ID: [Q9NPH5](#)

Cytogenetics: 11q14.3

Protein Families: Druggable Genome, Transmembrane

Gene Summary:

This gene encodes a member of the NOX-family of enzymes that functions as the catalytic subunit the NADPH oxidase complex. The encoded protein is localized to non-phagocytic cells where it acts as an oxygen sensor and catalyzes the reduction of molecular oxygen to various reactive oxygen species (ROS). The ROS generated by this protein have been implicated in numerous biological functions including signal transduction, cell differentiation and tumor cell growth. A pseudogene has been identified on the other arm of chromosome 11. Alternative splicing results in multiple transcript variants.[provided by RefSeq, Jan 2009] Transcript Variant: This variant (1) encodes isoform (a). Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.