

## Product datasheet for **RG238872**

### **NADPH oxidase 4 (NOX4) (NM\_001291929) Human Tagged ORF Clone**

#### **Product data:**

|                           |  |
|---------------------------|--|
| Product Type:             | Expression Plasmids  |
| Product Name:             | NADPH oxidase 4 (NOX4) (NM_001291929) Human Tagged ORF Clone |
| Tag:                      | TurboGFP   |
| Symbol:                   | NADPH oxidase 4  |
| Synonyms:                 | KOX; KOX-1; RENOX  |
| Mammalian Cell Selection: | Neomycin   |
| Vector:                   | pCMV6-AC-GFP (PS100010)                                      |
| E. coli Selection:        | Ampicillin (100 ug/mL)                                       |



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**ORF Nucleotide Sequence:**

>RG238872 representing NM\_001291929.  
 Blue=ORF Red=Cloning site Green=Tag(s)

```
GCTCGTTTAGTGAACCGTCAGAATTTTGTAAACGACTCACTATAGGGCGGCCGGGAATTCGTGACTG
GATCCGGTACCGAGGAGATCTGCCGCCCGCATCGCC
ATGCTTTCTGCAGTTACTGATTTAGGTTCCATTGAAAGCACTGTGTGGAAGAATTTACCTGTGGTTTCT
ATTCATCAGCTAGGATTGTGTCTAAGCAGAGCCTCAGCATCTGTTCTTAACTCAACTGCAGCCTTATC
CTTTTACCATGTGCCGAACACTCTGGCTTACCTCCGAGGATCACAGAAGGTTCCAAGCAGGAGAACC
AGGAGATTGTTGGATAAAAGCAGAACATTCATATTACCTGTGGTGTACTATCTGTATTTTCTCAGGC
GTGCATGTGGCTGCCATCTGGTGAATGCCCTCAACTTCTCAGTGAATTACAGTGAAGACTTTGTTGAA
CTGAATGCAGCAAGATACCGAGATGAGGATCCTAGAAAATTCTCTTCAAACTGTTCTGGCCTGACA
GGGGTCTGCATGGTGGTGGTGTCTATTCTCATGATCACAGCCTTACATATGCAATAAGAGTTTCTAAC
TATGATATCTTCTGGTACTCATAACCTCTTCTTGTCTTCTACATGCTGCTGACGTTGCATGTTTCA
GGAGGGCTGCTGAAGTATCAAATAATTTAGATACCCACCCTCCCGGCTGCATCAGTCTTAAACGAACC
AGCTCTCAGAATATTTCTTACCAGAGTATTTCTCAGAACATTTTCATGAACCTTTCCCTGAAGGATTT
TCAAAACCGGCAGAGTTTACCCAGCACAAATTTGTGAAGATTTGTATGGAAGAGCCAGATTCCAAGCT
AATTTTCCACAGACTTGGCTTTGGATTTCTGGACCTTTGTGCCTGTACTGTGCCGAAGACTTTACAGG
TATATCCGGAGCAATAAGCCAGTACCATCATTTCCGGTATAAGTATCCCTCAGATGTCATGGAATC
CGAATGGTCAAAGAAAATTTAAAGCAAGACCTGGTCAAGTATATTACTCTACATTGTCCCAGTGTATCT
GCATTAGAAAATCATCCATTTACCCTCACAAATGTGTCCAAGTCAAACCAAGCAACATTTGGGGTTCAT
CTTAAATAGTAGGAGACTGGACAGAACGATTTGAGATTTACTACTGCCTCCATCTAGTCAAGACTCC
GAAATCTGCCCTTCAATCAATCTAGAAATTTCCCAAGCTGTATATTGATGGTCTTTTGAAGTCCA
TTTGAGGAATCACTGAAGTATGAGGTGAGCCTCTGCGTGGCTGGAGGCATTGGAGTAACTCCATTTGCA
TCAATACTCAACACCCTGTTGGATGACTGGAAACCATACAAGCTTAGAAGACTATACTTTATTTGGGTA
TGCAGAGATATCCAGTCTTCCGTTGGTTTGCAGATTTACTCTGTATGTTGCATAACAAGTTTTGGCAA
GAGAACAGACCTGACTATGTCAACATCCAGCTGTACCTCAGTCAAACAGATGGGATACAGAAGATAATT
GGAGAAAATATCATGCACTGAATTCAGACTGTTTATAGGACGCTCCTCGGTGGAAACTTTTGTGTTGAT
GAAATAGCAAAATATAACAGAGGAAAACAGTTGGTGTGTTTCTGTTGTGGACCAATTCATATCCAAG
ACTCTTCATAAACTGAGTAAACAGAACAACCTCATATGGGACAAGATTTGAATAACAATAAAGAGTCTTTC
AGC
ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTAAAC
```

**Protein Sequence:**

>Peptide sequence encoded by RG238872  
 Blue=ORF Red=Cloning site Green=Tag(s)

```
MLSAVTDLGSIESTVSKNLPVSVIHQLGLCLSRASASVLNLCNLSILLPMCRLLAYLRGSQKVPSSRRT
RRLLDKSRTFHITCGVTICIFSGVHVAHLVNALNFSVNYSEDFVELNAARYRDEPRKLLFTTVPGLT
GVMVVVLFMLITASTYAIRVSNYDIFWYTHNLFVVFYMLLTLHVSGLLKYQTNLDTHPPGCISLNRT
SSQNISLPEYFSEHFHEPFPEGFSKPAEFTQHKFKVICMEEPRFQANFPQTLWLSGPLCLYCAERLYR
YIRSNKPVTIISVISHPSDVMEIRMVKNFKARPGQYITLHCPVSVALENHPFTLTMCPTETKATFGVH
LKIVGDWTERFRDLLLPSSQDSEILPFIQSRNPKLYIDGPFSGPFEEVSLNVEVSLCVAGGIGVTPFA
SILNLLDDWKPYKLRRLYFIWVCRDIQSFRWFADLLCMLHNKFWQENRPDYVNIQLYLSQTDGIQKII
GEKYHALNSRLF IGRPRWKL FDEIAKYNRGKTGVVFCGPNLSKTLHKL SNQNNSYGRFEYNKESF
S
TRTRPLEMESDESGLPAMEIECRITGTLNGVEFELVGGEGTPEQGRMTNKMSTKGALTFSPYLLSHV
MGYGFYHFGTYPSGYENPFLHAINNGGYNTRIEKYEDGGVLHVSFSYRYEAGRVIGDFKVMGTGFPEP
SVIFTDKIIIRSNAIVEHLHPMGDNDLDGSFTRTFSLRDGGYSSVVD SHMHFKSAIHP SILQNGGPMFA
FRRVEEDHSNTELGIVEYQHAFKTPDADAGEERV
```

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**


**ACCN:** NM\_001291929

**ORF Size:** 1659 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).

**RefSeq:** [NM\\_001291929.1](#), [NP\\_001278858.1](#)

**RefSeq Size:** 4122 bp

**RefSeq ORF:** 1662 bp

**Locus ID:** 50507

**Cytogenetics:** 11q14.3

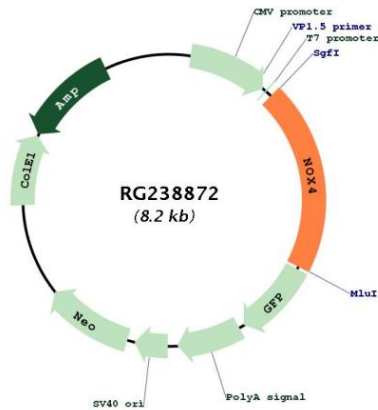
**Protein Families:** Druggable Genome, Transmembrane

**MW:** 63.9 kDa

**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]

**Product images:**



Circular map for RG238872