

## Product datasheet for **RC234235**

### **DUOXA1 (NM\_001276264) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	DUOXA1 (NM_001276264) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	DUOXA1
Synonyms:	mol; NIP; NUMBIP
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

**ORF Nucleotide Sequence:**

>RC234235 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGCTACTTTGGGACACACATTCCCCTTCTATGTGTCGCCCAAGCCAACCTTCCCGATGGACACCACTT  
 TGGCCAGCATCATCATGATCTTTCTGACTGCACTGGCCACGTTTCATCGTCATCCTGCCTGGCATTGGGG  
 AAAGACGAGGCTGTTCTGGCTGCTTCGGGTGGTACCAGCTTATTCATCGGGGCTGCAATCCTGGCTGTG  
 AATTTTCAGTTCTGAGTGGTCTGTGGGCCAGGTCAGCACCAACACATCATAACAAGGCCCTCAGTTCTGAGT  
 GGATCAGCGTGATATTGGGCTGCAGGTCGGGCTGGTGGAGTCAACATCACACTCACAGGGACCCCGT  
 GCAGCAGTGAATGAGACCATCAATTACAACGAGGAGTTCACCTGGCGCTGGGTGAGAATATGCTGAG  
 GAGTATGCAAAGGCTCTGGAGAAGGGGCTGCCAGACCCTGTGTTGTACCTAGCTGAGAAGTTCACCCAA  
 GAAGCCCATGTGGCCTATACCGCCAGTACCGCCTGGCGGGACACTACACCTCAGCCATGCTATGGGTGGC  
 ATTCCTCTGCTGGCTGCTGGCCAATGTGATGCTCTCCATGCCTGTGCTGGTATATGGTGGCTACATGCTA  
 TTGGCCACGGGCATCTTCCAGCTGTTGGCTCTGCTCTTCTTCTCCATGGCCACATCACTCACCTCACCCCT  
 GTCCCCTGCACCTGGGCGCTTCTGTGCTGCATACTCACCATGGGCCTGCCTTCTGGATCACATTGACCAC  
 AGGACTGCTGTGTGCTGCTGGGCTGGCTATGGCGGTGGCCACAGGATGCAGCCTCACAGGCTGAAG  
 GCTTTCTTCAACCAGAGTGTGGATGAAGACCCCATGCTGGAGTGGAGTCTGAGGAAGGTGGACTCCTGA  
 GCCCCCGTACCGGTCATGGCTGACAGTCCCAAGTCCCAGGACATTCCCTGTGAGGCTTCTCCAC  
 CAAGGCATACTATCGCCCAGGAGACTTCCCTGGTGCCTGCGGATGTCGAGGCCTCGGCCAGCAGCG  
 CTCAGTGCCCTTCTGGAGCTCTCTGGCCAGGCCTGGCGGGCACTGCTTCCCGCCTGCGATGTCCCA  
 AGGCGGGGAAGGAGTCCAGATTGGTCCCCTCACAGTCTTGGCGCTTGGTCCAGAAGGTTGCGAAGA  
 GCGCTGGGCCGAACATACTGGAGACTCACACGGCCCTCCGAGGAAGAGGCACAGGACGCTGTGGCGG  
 TGGGGATCGAAAGAAAGGAGGGCATGTGGAGTCAAGGCTATGTTGCCAGGCTGGTCTCGAACTCTGGCC  
 TCAAACGACCTTCTGCCTCGACCTCCCAAAGTCTGGGATTACAGGCGTGATGCCCGGGCCTTCTTCCA  
 TCTTTTGGAGCCTACCCCTGTGTTACCTCCCGCCACACACCTCTAATC

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC234235 protein sequence  
 Red=Cloning site Green=Tags(s)

MATLGHTFPFYAGPKPTFPMDTTLASIIIMIFLTALATFIVILPGIRGKTRLFWLLRVVTSLFIGAAILAV  
 NFSSEWSVGVSTNTSYKAFSSEWISADIGLQVGLGGVNIITLGTTPVQQLNETINYNEEFTWRLGENYAE  
 EYAKALEKGLPDPVLYLAEKFTPRSPCGLYRQYRLAGHYTSAMLWVAFLCWLLANVMLSMPVLYGGYML  
 LATGIFQLLALLFFSMATSLTSPCLHLGASVLHTHHGPAFWITLTTGLLCVLLGLAMAVHRMQPHRLK  
 AFFNQSVDEDPMLEWSPEEGLLSPRYRSMADSPKSDIPLSEASSTKAYRPRRLSLVPADVRGLAPAA  
 LSALPGALLAQAWRALLPGLRCPKAGKESRLGPPHSPWRFGPEGCEERWAEHTGDSRPLRGRGTGRLWR  
 WSKERRACGVRAMLPRLVSNGLKRPSCLDLKPCWDYRRDARAFFHLLLEPTPCVTSRHTPLI

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk6332\\_g01.zip](https://cdn.origene.com/chromatograms/mk6332_g01.zip)

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shutting:



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_001276264

**ORF Size:** 1449 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\\_001276264.2](#)
**RefSeq Size:** 1990 bp

**RefSeq ORF:** 1452 bp

**Locus ID:** 90527

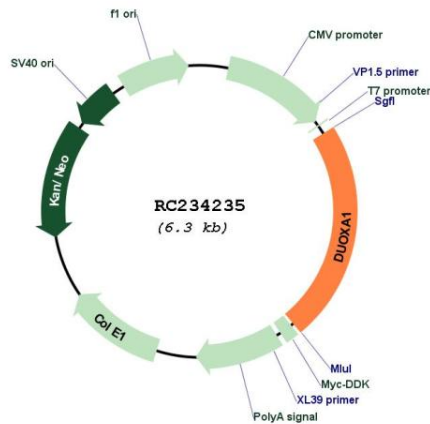
**UniProt ID:** [Q1HG43](#)
**Cytogenetics:** 15q21.1

**Protein Families:** Transmembrane

**MW:** 53.5 kDa

**Gene Summary:** Dual oxidases DUOX1 and DUOX2 are NADPH oxidases which are involved in hydrogen peroxide production necessary for thyroid hormonogenesis. They form a heterodimer with specific maturation factors DUOXA1 and DUOXA2, respectively, which is essential for the maturation and function of the DUOX enzyme complexes. This gene encodes the DUOX1 activator or maturation factor DUOXA1. Rat studies identified a bidirectional promoter which controls the transcription of the DUOX1 and DUOX1 genes. This protein is cotransported to the cell surface when coexpressed with DUOX1 and is retained in the endoplasmic reticulum when expressed without DUOX1 protein. The expression of this gene or the DUOX1 gene is not suppressed by thyroglobulin (Tg), a macromolecular precursor in thyroid hormone synthesis, while the expression of the DUOX2 and DUOXA2 are significantly suppressed by the Tg. This protein is also a p53-regulated neurogenic factor involved in p53 dependent neuronal differentiation. Multiple alternatively spliced transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jan 2013]

**Product images:**



Circular map for RC234235