

## Product datasheet for **RC232407**

### **DUOXA1 (NM\_001276267) Human Tagged ORF Clone**

#### Product data:

Product Type:	Expression Plasmids
Product Name:	DUOXA1 (NM_001276267) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	DUOXA1
Synonyms:	mol; NIP; NUMBIP
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
ORF Nucleotide Sequence:	>RC232407 representing NM_001276267 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**GCGATCGCC**

ATGGCTACTTTGGGACACACATTCCCCTTCTATGCTGGCCCCAAGCCAACCTTCCCGATGGACACCACTT  
TGGCCAGCATCATGATCTTTCTGACTGCACTGGCCACGTTTCATCGTCATCCTGCCTGGCATTGGGG  
AAAGACGAGGCTGTTCTGGCTGCTTCGGGTGGTGACCAGCTTATTCATCGGGGCTGCAATCCTGGGGACC  
CCCGTGCAGCAGCTGAATGAGACCATCAATTACAACGAGGAGTTCACCTGGCGCCTGGGTGAGAATATG  
CTGAGGAGTATGCAAAGGCTCTGGAGAAGGGGCTGCCAGACCCTGTGTTGTACCTAGCTGAGAAGTTCAC  
TCCAAGAAGCCCATGTGGCCTATACCGCCAGTACCGCCTGGCGGGACACTACACCTCAGCCATGCTATGG  
GTGGCATTCTCTGCTGGCTGCTGGCCAATGTGATGCTCTCCATGCCTGTGCTGGTATATGGTGGCTACA  
TGCTATTGGCCACGGGCATCTCCAGCTGTTGGCTGCTCTTCTTCCATGGCCACATCACTCACCTC  
ACCCTGTCCCCTGCACCTGGGCGCTTCTGTGCTGCATACTCACCATGGGCCTGCCTTCTGGATCATTG  
ACCACAGGACTGCTGTGTGCTGCTGGCCTGGCTATGGCGGTGGCCACAGGATGCAGCCTCACAGGC  
TGAAGGCTTTCTCAACCAGAGTGTGGATGAAGACCCCATGCTGGAGTGGAGTCTCGAAGGTGGAT  
CCTGAGCCCCCGCTACCGTCCATGGCTGACAGTCCCAAGTCCCAGGACATCCCCTGTCAGAGGCTTCC  
TCCACCAAGGCATACTGTAAGGAGGCACACCCCAAGATCCTGATTGTGCTTTA

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC232407 representing NM\_001276267  
 Red=Cloning site Green=Tags(s)

MATLGHFTFPFYAGPKPTFPMDTTLASIIMIFLTALATFIVILPGIRGKTRLFWLLRVVTSLFIGAAILGT  
 PVQQLNETINYNEEFTWRLGENYAEYAKALEKGLPDPVLYLAEKFTPRSPCGLYRQYRLAGHYTSAMLW  
 VAFLCWLLANVMLSMPVLYVGGYMLLATGIFQLLALLFFSMATSLTSPCPLHLGASVLHTHHGPAFWITL  
 TTGLLCVLLGLAMAVAHRMQPHRLKAFFNQSVDEDPMLEWSPEEGLLSPRYRSMADSPKSQDIPLSEAS  
 STKAYCKEAHPKDPDCAL

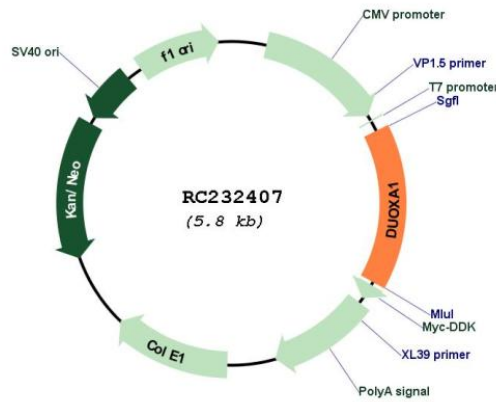
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**Plasmid Map:**



**ACCN:** NM\_001276267

**ORF Size:** 894 bp

<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_001276267.2</a>
<b>RefSeq Size:</b>	3049 bp
<b>RefSeq ORF:</b>	897 bp
<b>Locus ID:</b>	90527
<b>UniProt ID:</b>	<a href="#">Q1HG43</a>
<b>Cytogenetics:</b>	15q21.1
<b>Protein Families:</b>	Transmembrane
<b>MW:</b>	33.6 kDa
<b>Gene Summary:</b>	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 DUOXA1 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]