

## Product datasheet for **SC333227**

### **DUOXA1 (NM\_001276266) Human Untagged Clone**

#### **Product data:**

**Product Type:** Expression Plasmids  
**Product Name:** DUOXA1 (NM\_001276266) Human Untagged Clone  
**Tag:** Tag Free  
**Symbol:** DUOXA1  
**Synonyms:** mol; NIP; NUMBIP  
**Vector:** pCMV6-Entry (PS100001)  
**Fully Sequenced ORF:** >SC333227 representing NM\_001276266.  
Blue=Insert sequence Red=Cloning site Green=Tag(s)

```
ATGGCTACTTTGGGACACACATTCCCCTTCTATGCTGGCCCAAGCCAACCTTCCCAGTGGACACCACT
TTGGCCAGCATCATGATCTTTCTGACTGCACTGGCCACGTTTCATCGTCATCCTGCCTGGCATTCCG
GGAAAGACGAGGCTGTTCTGGCTGCTTCGGGTGGTGACCAGCTTATTCATCGGGCTGCAATCCTGGCT
GTGAATTCAGTTCTGAGTGGTCTGTGGCCAGGTCAGCACCAACACATCATAACAAGGCCTTCAGTTCT
GAGTGGATCAGCGCTGATATTGGGCTGCAGGTCGGGCTGGGTGGAGTCAACATCACACTCACAGGGACC
CCCGTGCAGCAGCTGAATGAGACCATCAATTACAACGAGGAGTTCACCTGGCGCCTGGGTGAGAAGTAT
GCTGAGGAGTATGCAAAGGCTCTGGAGAAGGGGCTGCCAGACCCTGTGTTGTACCTAGCTGAGAAGTTC
ACTCCAAGAAGCCCATGTGGCCTATACCGCCAGTACCGCCTGGCGGGACACTACACCTCAGCCATGCTA
TGGGTGGCATTCTCTGCTGGCTGCTGGCCAATGTGATGCTCTCCATGCCTGTGCTGGTATATGGTGGC
TACATGCTATTGGCCACGGGCATCTCCAGCTGTTGGCTCTGCTCTTCTCTCCATGGCCACATCACTC
ACCTCACCTGTCCCCTGCACCTGGGCGCTTCTGTGCTGCATACTCACCATGGGCTGCCTTCTGGATC
ACATTGACCACAGGACTGCTGTGTGTGCTGCTGGGCTGGCTATGGCGGTGGCCACAGGATGCAGCCT
CACAGGCTGAAGGCTTTCTTCAACCAGAGTGTGGATGAAGACCCCATGCTGGAGTGGAGTCTGAGGAA
GGTGGACTCTGAGCCCCGCTACCGTCCATGGCTGACAGTCCAAGTCCCAGGACATCCCCTGTCA
GAGGCTTCTCCACCAAGGCATACTGTAAGGAGGCACACCCCAAGATCCTGATTGTGCTTTATAA
```

**Restriction Sites:** Sgfl-Mlul  
**ACCN:** NM\_001276266  
**Insert Size:** 1032 bp  
**OTI Disclaimer:** Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).  
**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).



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**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\\_001276266.1](#)

**RefSeq Size:** 1111 bp

**RefSeq ORF:** 1032 bp

**Locus ID:** 90527

**UniProt ID:** [Q1HG43](#)

**Cytogenetics:** 15q21.1

**Protein Families:** Transmembrane

**MW:** 37.8 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 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]

Transcript Variant: This variant (4) lacks two exons and its transcription extends past a splice site that is used in variant 1, resulting in a novel 3' coding region and 3' UTR compared to variant 1. The resulting isoform (3, also known as alpha) is shorter and has a distinct C-terminus, compared to isoform 1.