

Product datasheet for **RG232408**

DUOXA1 (NM_001276268) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: DUOXA1 (NM_001276268) Human Tagged ORF Clone
Tag: TurboGFP
Symbol: DUOXA1
Synonyms: mol; NIP; NUMBIP
Mammalian Cell Selection: Neomycin
Vector: pCMV6-AC-GFP (PS100010)
E. coli Selection: Ampicillin (100 ug/mL)
ORF Nucleotide Sequence: >RG232408 representing NM_001276268
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCTACTTTGGGACACACATTCCCCTTCTATGCTGGCCCCAAGCCAACCTTCCCAGTGGACACCACTT
TGGCCAGCATCATGATCTTTCTGACTGCACTGGCCACGTTTCATCGTCATCCTGCCTGGCATTTCGGGG
AAAGACGAGGCTGTTCTGGCTGCTTCGGGTGGTGACCAGCTTATTCATCGGGGCTGCAATCCTGGGGACC
CCCGTGCAGCAGCTGAATGAGACCATCAATTACAACGAGGAGTTCACCTGGCGCCTGGGTGAGAAGTTCAC
CTGAGGAGTATGCAAAGGCTCTGGAGAAGGGGCTGCCAGACCCTGTGTTGTACCTAGCTGAGAAGTTCAC
TCCAAGAAGCCCATGTGGCCTATACCGCCAGTACCGCCTGGCGGGACACTACACCTCAGCCATGCTATGG
GTGGCATTCTCTGCTGGCTGCTGGCCAATGTGATGCTCTCCATGCCTGTGCTGGTATATGGTGGCTACA
TGCTATTGGCCACGGGCATCTTCAGCTGTTGGCTCTGCTCTTCTTCCATGGCCACATCACTCACCTC
ACCCTGTCCCCTGCACCTGGGCGCTTCTGTGCTGCATACTCACCATGGGCTGCCTTCTGGATCACATTG
ACCACAGGACTGCTGTGTGCTGCTGGGCTGGCTATGGCGGTGGCCACAGGATGCAGCCTCACAGGC
TGAAGGCTTTCTCAACCAGAGTGTGGATGAAGACCCCATGCTGGAGTGGAGTCCCTGAGGAAGGTGGACT
CCTGAGCCCCGCTACCGGTCCATGGCTGACAGTCCCAAGTCCCAGGACATTCCCCTGTGAGAGGCTTCC
TCCACCAAGGCATACTGTAAGGAGGCACACCCCAAGATCCTGATTGTGCTTTA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >RG232408 representing NM_001276268
Red=Cloning site Green=Tags(s)

MATLGHFTFPFYAGPKPTFPMDTTLASIIMIFLTALATFIVILPGIRGKTRLFWLLRVVTSLFIGAAILGT
 PVQQLNETINYNEEFTWRLGENYAEYAKALEKGLPDPVLYLAEKFTPRSPCGLYRQYRLAGHYTSAMLW
 VAFLCWLLANVMLSMPVLYVGGYMLLATGIFQLLALLFFSMATSLTSPCPLHLGASVLHTHHGPAFWITL
 TTGLLCVLLGLAMAVAHMRMQPHRLKAFFNQSVDEDPMLEWSPEEGLLSPRYRSMADSPKSQDIPLSEAS
 STKAYCKEAHPKDPDCAL

TRTRPLE - GFP Tag - V

Restriction Sites:

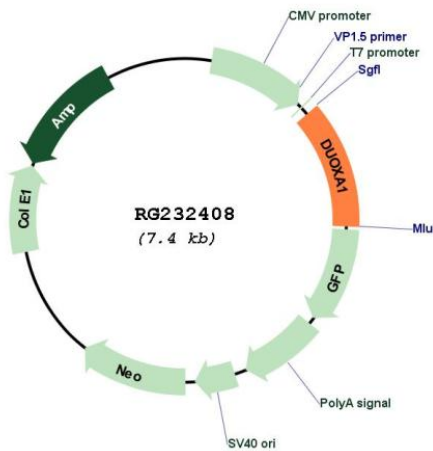
SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



Plasmid Map:



ACCN: NM_001276268

ORF Size: 894 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:	<ol style="list-style-type: none">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_001276268.2
RefSeq Size:	2709 bp
RefSeq ORF:	897 bp
Locus ID:	90527
UniProt ID:	Q1HG43
Cytogenetics:	15q21.1
Protein Families:	Transmembrane
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]