

## Product datasheet for **RG204156**

### Superoxide Dismutase 3 (SOD3) (NM\_003102) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Superoxide Dismutase 3 (SOD3) (NM_003102) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Superoxide Dismutase 3
Synonyms:	EC-SOD
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG204156 representing NM_003102 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGCTGGCGCTACTGTGTTCTGCCTGCTCCTGGCAGCCGGTGCCTCGGACGCCTGGACGGGCGAGGACT  
CGGCGGAGCCCAACTCTGACTCGGCGGAGTGGATCCGAGACATGTACGCCAAGGTCACGGAGATCTGGCA  
GGAGGTCATGCAGCGCGGGACGACGACGGCAGCTCCACGCCGCTGCCAGGTGCAGCCGTCGGCCACG  
CTGGACGCCGCGCAGCCCCGGGTACCGCGCTCGTCTCTCCGGCAGCTTGCGCCCGGCCAAGCTCG  
ACGCCCTTCTCGCCCTGGAGGGTTCCCGACCGAGCCGAACAGCTCCAGCCGCGCATCCACGTGCACCA  
GTTCCGGGACCTGAGCCAGGGCTGCGAGTCCACCGGGCCCACTACAACCGCTGGCCGTGCCGCACCCG  
CAGCACCCGGGGACTTCGGCAACTTCGCGGTCCGCGACGGCAGCCTCTGGAGGTACCGCGCCGGCTGG  
CCGCTCGCTCGCGGGCCCGCACTCCATCGTGGGCCGGGCGTGGTCTCCACGCTGGCGAGGACGACCT  
GGGCCGCGGGCAACCAGGCCAGCGTGGAGAACGGGAACCGGGCCGGCGGCTGGCCTGCTGCGTGGT  
GGCGTGTGCGGGCCGGGCTCTGGGAGCGCCAGGCGGGGAGCACTCAGAGCGCAAGAAGCGGGCGCGC  
AGAGCGAGTGCAAGGCCGCC

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >RG204156 representing NM\_003102  
 Red=Cloning site Green=Tags(s)

MLALLCSCLLLAAGASDAWTGEDSAEPNSDSAIEWIRDMYAKVTEIWQEVMQRRDDGTLHAACQVQPSAT  
 LDAAQPRVTGVVLFRLAPRAKLDAFFALEGFTEPNSSRAIHVHQFGDL SQGCESTGPHYNPLAVPH  
 QHPGDFGNFAVRDGLWRYRAGLAASLAGPHSIVGRAVVVHAGEDDLGRGGNQASVENGNAGRRLACCVV  
 GVCGPGLWERQAREHSERKKRRRESECKAA

TRTRPLE - GFP Tag - V

**Restriction Sites:** Sgfl-MluI

**Cloning Scheme:**



**ACCN:** NM\_003102

**ORF Size:** 720 bp

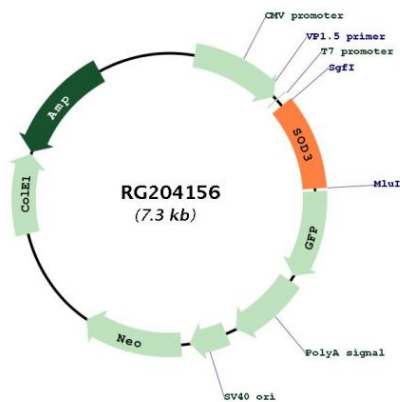
**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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.

<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>	<u>NM_003102.1, NP_003093.1</u>
<b>RefSeq Size:</b>	1546 bp
<b>RefSeq ORF:</b>	723 bp
<b>Locus ID:</b>	6649
<b>UniProt ID:</b>	<u>P08294</u>
<b>Cytogenetics:</b>	4p15.2
<b>Domains:</b>	sodcu
<b>Protein Families:</b>	Druggable Genome, Secreted Protein
<b>Gene Summary:</b>	<p>This gene encodes a member of the superoxide dismutase (SOD) protein family. SODs are antioxidant enzymes that catalyze the conversion of superoxide radicals into hydrogen peroxide and oxygen, which may protect the brain, lungs, and other tissues from oxidative stress. Proteolytic processing of the encoded protein results in the formation of two distinct homotetramers that differ in their ability to interact with the extracellular matrix (ECM). Homotetramers consisting of the intact protein, or type C subunit, exhibit high affinity for heparin and are anchored to the ECM. Homotetramers consisting of a proteolytically cleaved form of the protein, or type A subunit, exhibit low affinity for heparin and do not interact with the ECM. A mutation in this gene may be associated with increased heart disease risk. [provided by RefSeq, Oct 2015]</p>

Product images:



Circular map for RG204156