

Product datasheet for **RC204156**

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:	Myc-DDK
Symbol:	Superoxide Dismutase 3
Synonyms:	EC-SOD
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC204156 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGCTGGCGCTACTGTGTTCTGCCTGCTCCTGGCAGCCGGTGCCTCGGACGCCTGGACGGGCGAGGACT
CGGCGGAGCCAACTCTGACTCGGCGGAGTGGATCCGAGACATGTACGCCAAGGTCACGGAGATCTGGCA
GGAGGTCATGCAGCGCGGGACGACGACGGCAGCTCCACGCCGCTGCCAGGTGCAGCCGTCGGCCACG
CTGGACGCCGCGCAGCCCCGGGTGACCGGCGTCTCTCTCCGGCAGCTTGCGCCCGGCCAAGCTCG
ACGCCCTTCTCGCCCTGGAGGGTTCCTCCGACCGAGCCGAACAGCTCCAGCCGCGCATCCACGTGCACCA
GTTCCGGGACCTGAGCCAGGGCTGCGAGTCCACCGGGCCCACTACAACCGCTGGCCGTGCCGCACCCG
CAGCACCCGGGGACTTCGGCAACTTCGCGGTCCGCGACGGCAGCCTCTGGAGGTACCGCGCCGGCTGG
CCGCTCGCTCGCGGGCCCGCACTCCATCGTGGGCCGGGCGTGGTCTGTCACGCTGGCGAGGACGACCT
GGGCCGCGGGCAACCAGGCCAGCGTGGAGAACGGGAACGCGGGCCGGCGGCTGGCCTGCTGCGTGGT
GGCGTGTGCGGGCCGGGCTCTGGGAGCGCCAGGCGGGGAGCACTCAGAGCGCAAGAAGCGGGCGCGC
AGAGCGAGTGCAAGGCCGCC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC204156 protein sequence
 Red=Cloning site Green=Tags(s)

MLALLCSCLLLAAGASDAWTGEDSAEPNSDSAEWIRDMYAKVTEIWQEVMQRRDDGTLHAACQVQPSAT
 LDAAQPRVTGVVLFRLAPRAKLDAFFALEGFTEPNSSSRAIHVHQFGDL SQGCESTGPHYNPLAVPH
 QHPGDFGNFAVRDGLWRYRAGLAASLAGPHSIVGRAVVVHAGEDDLGRGGNQASVENGNAGRRLACCVV
 GVCGPGLWERQAREHSERKKRRRESECKAA

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6213_c04.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_003102

ORF Size: 720 bp

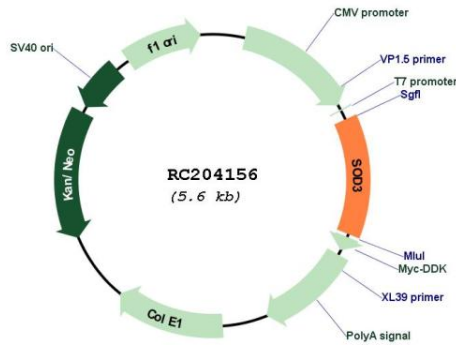
OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA 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 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](#)

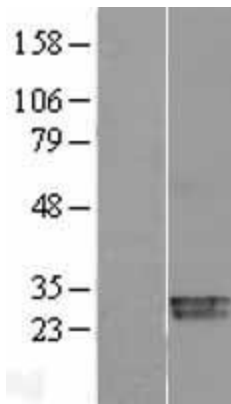
OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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:	<u>NM_003102.1, NP_003093.1</u>
RefSeq Size:	1546 bp
RefSeq ORF:	723 bp
Locus ID:	6649
UniProt ID:	<u>P08294</u>
Cytogenetics:	4p15.2
Domains:	sodcu
Protein Families:	Druggable Genome, Secreted Protein
MW:	25.9 kDa
Gene Summary:	<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>

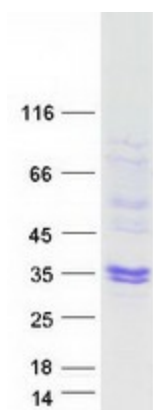
Product images:



Circular map for RC204156



Western blot validation of overexpression lysate (Cat# [LY418899]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC204156 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified SOD3 protein (Cat# [TP304156]). The protein was produced from HEK293T cells transfected with SOD3 cDNA clone (Cat# RC204156) using MegaTran 2.0 (Cat# [TT210002]).