

Product datasheet for **RG200725**

Superoxide Dismutase 1 (SOD1) (NM_000454) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Superoxide Dismutase 1 (SOD1) (NM_000454) Human Tagged ORF Clone
Tag: TurboGFP
Symbol: Superoxide Dismutase 1
Synonyms: ALS; ALS1; HEL-S-44; homodimer; hSod1; IPOA; SOD; STAHP
Mammalian Cell Selection: Neomycin
Vector: pCMV6-AC-GFP (PS100010)
E. coli Selection: Ampicillin (100 ug/mL)
ORF Nucleotide Sequence: >RG200725 representing NM_000454
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCGACGAAGGCCGTGTGCGTGCTGAAGGGCGACGGCCAGTGCAGGGCATCATCAATTCGAGCAGA
AGGAAAGTAATGGACCAGTGAAGGTGTGGGAAGCATTAAAGGACTGACTGAAGGCCTGCATGGATTCCA
TGTTTCATGAGTTGGAGATAATACAGCAGGCTGTACCAGTGCAGGTCCTCACTTTAATCCTCTATCCAGA
AAACACGGTGGCCAAAGGATGAAGAGAGGCATGTTGGAGACTTGGCAATGTGACTGCTGACAAAGATG
GTGTGGCCGATGTGTCTATTGAAGATTCTGTGATCTCACTCTCAGGAGACCATTGCATCATTGGCCGCAC
ACTGGTGGTCCATGAAAAGCAGATGACTTGGCAAAGGTGGAATGAAGAAAGTACAAAGACAGGAAAC
GCTGGAAGTCGTTTGGCTTGTGGTGAATTGGGATCGCCCAA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG200725 representing NM_000454
Red=Cloning site Green=Tags(s)
MATKAVCVLKGDPVQGIINFEQKESNGPVKVGSIKGLTEGLHGFHVHEFGDNTAGCTSAGPHFNPLSR
KHGGPKDEERHVGD LGNVTADKGDVADSVI EDSVISL SGDHCIIGRTL VVHEKADDLKGKGGNEESTKTGN
AGSRLACGVIGIAQ

TRTRPLE - GFP Tag - V

Chromatograms: https://cdn.origene.com/chromatograms/ja3186_f06.zip

Restriction Sites: Sgfl-Mlul



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Cloning Scheme:


ACCN: NM_000454

ORF Size: 462 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.

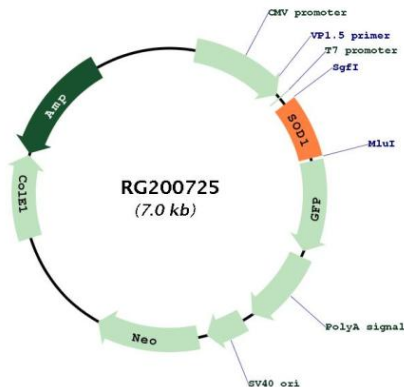
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

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_000454.5
RefSeq Size:	981 bp
RefSeq ORF:	465 bp
Locus ID:	6647
UniProt ID:	P00441
Cytogenetics:	21q22.11
Domains:	sodcu
Protein Families:	Druggable Genome
Protein Pathways:	Amyotrophic lateral sclerosis (ALS), Huntington's disease, Prion diseases
Gene Summary:	The protein encoded by this gene binds copper and zinc ions and is one of two isozymes responsible for destroying free superoxide radicals in the body. The encoded isozyme is a soluble cytoplasmic protein, acting as a homodimer to convert naturally-occurring but harmful superoxide radicals to molecular oxygen and hydrogen peroxide. The other isozyme is a mitochondrial protein. In addition, this protein contains an antimicrobial peptide that displays antibacterial, antifungal, and anti-MRSA activity against <i>E. coli</i> , <i>E. faecalis</i> , <i>S. aureus</i> , <i>S. aureus</i> MRSA LPV+, <i>S. agalactiae</i> , and yeast <i>C. krusei</i> . Mutations in this gene have been implicated as causes of familial amyotrophic lateral sclerosis. Rare transcript variants have been reported for this gene. [provided by RefSeq, Jul 2020]

Product images:



Circular map for RG200725