

Product datasheet for **RG212981**

SOD2 (NM_001024466) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: SOD2 (NM_001024466) Human Tagged ORF Clone
Tag: TurboGFP
Symbol: SOD2
Synonyms: GClnc1; IPO-B; IPOB; Mn-SOD; MNSOD; MVCD6
Mammalian Cell Selection: Neomycin
Vector: pCMV6-AC-GFP (PS100010)
E. coli Selection: Ampicillin (100 ug/mL)
ORF Nucleotide Sequence: >RG212981 representing NM_001024466
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGTTGAGCCGGGCAGTGTGCGGCACCAGCAGGCAGCTGGCTCCGGTTTTGGGGTATCTGGGCTCCAGGC
 AGAAGCACAGCCTCCCCGACCTGCCCTACGACTACGGCGCCCTGGAACCTCACATCAACGCGCAGATCAT
 GCAGCTGCACCACAGCAAGCACCACGGCCTACGTGAACAACCTGAACGTCACCGAGGAGAAGTACCAG
 GAGGCGTTGGCCAAGGGGAGTTGCTGGAAGCCATCAAACGTGACTTTGGTTCTTTGACAAGTTAAGG
 AGAAGCTGACGGCTGCATCTGTTGGTGTCCAAGGCTCAGGTTGGGGTTGGCTTGGTTTCAATAAGGAACG
 GGGACACTTACAAATTGCTGCTTGTCCAAATCAGGATCCACTGCAAGGAACAACAGGCCTTATTCCACTG
 CTGGGGATTGATGTGTGGGAGCACGCTTACTACCTTCAAGTATAAAAATGTGAGGCCTGATTATCTAAAAG
 CTATTTGGAATGTAATCAACTGGGAGAATGTAAGTAAAGATAACATGGCTTGCAAAAAG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG212981 representing NM_001024466
 Red=Cloning site Green=Tags(s)

MLSRVAVCGTSRQLAPVLYLGSRQKHSLPDLPYDYGALEPHINAQIMQLHHSKHHAAYVNNLNVTVEEKYQ
 EALAKGELLEAIKRDFGSFDFKFKELTAASVGVQSGWGLGFNKERGHLQIAACPNDPLQGTTLIPL
 LGIDVWEHAYYLQKNVRPDYLKAIWNVINWENVTERYMACK

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

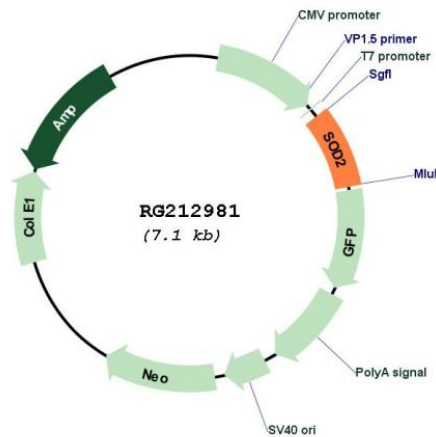


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Cloning Scheme:



Plasmid Map:



ACCN: NM_001024466

ORF Size: 549 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:	<u>NM_001024466.3</u>
RefSeq Size:	918 bp
RefSeq ORF:	552 bp
Locus ID:	6648
UniProt ID:	<u>P04179</u>
Cytogenetics:	6q25.3
Protein Families:	Druggable Genome, Transcription Factors
Protein Pathways:	Huntington's disease
Gene Summary:	This gene is a member of the iron/manganese superoxide dismutase family. It encodes a mitochondrial protein that forms a homotetramer and binds one manganese ion per subunit. This protein binds to the superoxide byproducts of oxidative phosphorylation and converts them to hydrogen peroxide and diatomic oxygen. Mutations in this gene have been associated with idiopathic cardiomyopathy (IDC), premature aging, sporadic motor neuron disease, and cancer. Alternative splicing of this gene results in multiple transcript variants. A related pseudogene has been identified on chromosome 1. [provided by RefSeq, Apr 2016]