

## Product datasheet for RC212981

### SOD2 (NM\_001024466) Human Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** SOD2 (NM\_001024466) Human Tagged ORF Clone  
**Tag:** Myc-DDK  
**Symbol:** SOD2  
**Synonyms:** GClnc1; IPO-B; IPOB; Mn-SOD; MNSOD; MVCD6  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**ORF Nucleotide Sequence:** >RC212981 representing NM\_001024466  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGTTGAGCCGGGCAGTGTGCGGCACCAGCAGGCAGCTGGCTCCGGTTTTGGGGTATCTGGGCTCCAGGC  
 AGAAGCACAGCCTCCCCGACCTGCCCTACGACTACGGCGCCCTGGAACCTCACATCAACGCGCAGATCAT  
 GCAGCTGCACCACAGCAAGCACCACGGCCCTACGTGAACAACCTGAACGTCACCGAGGAGAAGTACCAG  
 GAGGCGTTGGCCAAGGGGAGTTGCTGGAAGCCATCAAACGTGACTTTGGTTCCTTTGACAAGTTAAGG  
 AGAAGCTGACGGCTGCATCTGTTGGTGTCCAAGGCTCAGGTTGGGGTTGGCTTGGTTTCAATAAGGAACG  
 GGGACACTTACAAATTGCTGCTTGTCCAATCAGGATCCACTGAAGGAACAACAGGCCTTATTCCACTG  
 CTGGGGATTGATGTGTGGGAGCACGCTTACTACCTTCAGTATAAAAATGTCAGGCCTGATTATCTAAAAG  
 CTATTTGGAATGTAATCAACTGGGAGAATGTAAGTAAAGATAACATGGCTTGCAAAAAG

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC212981 representing NM\_001024466  
 Red=Cloning site Green=Tags(s)

MLSRVAVCGTSRQLAPVLGYLGSRQKHSLPDLPYDYGALEPHINAQIMQLHHSKHHAAYVNNLNVTVEEKYQ  
 EALAKGELLEAIKRDFGSDKFKKELTAASVGVQGSWGLGFNKERGHLQIAACPNDPLQGTGLIPL  
 LGIDVWEHAYYLQYKNVRPDYLKAIWNVINWENVTERYMACKK

**TRTRPLEQKLISEEDLAANDILDYKDDDDKV**

**Chromatograms:** [https://cdn.origene.com/chromatograms/ja1456\\_g11.zip](https://cdn.origene.com/chromatograms/ja1456_g11.zip)



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Restriction Sites: SgfI-MluI

Cloning Scheme:



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:
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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM\\_001024466.3](#)

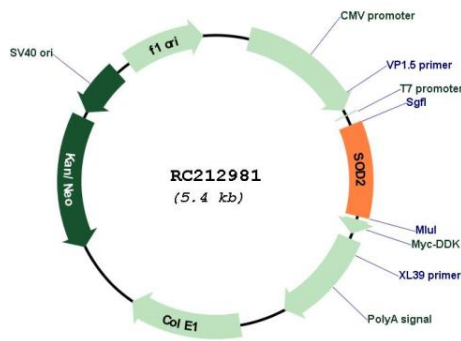
RefSeq Size: 918 bp

RefSeq ORF: 552 bp

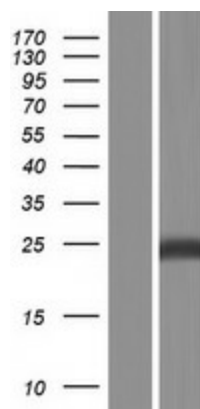
**Locus ID:** 6648  
**UniProt ID:** [P04179](#)  
**Cytogenetics:** 6q25.3  
**Protein Families:** Druggable Genome, Transcription Factors  
**Protein Pathways:** Huntington's disease  
**MW:** 20.72 kDa

**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]

### Product images:



Circular map for RC212981



Western blot validation of overexpression lysate (Cat# [LY422511]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC212981 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).