

Superoxide Dismutase

Human, Recombinant (rHuSOD)

Expressed in *E. coli*

Cat. No. CRP0860

Lot. No. (See product label)

PRODUCT INFORMATION

Description: Superoxide dismutase is an essential component of biological defense against toxic effects of oxygen. It can catalyze the dismutation of superoxide radicals to molecular oxygen. It has been implicated in cellular aging due to its reduced activity in aging cells. Recombinant human superoxide dismutase is expressed in *E. coli*.

Synonyms: EC-SOD; MGC20077; Cu-Znprecursor; EC 1.15.1.1; Extracellular superoxide dismutase; superoxide dismutase 3, extracellular

M. W. : 15,918 Da

Recombinant: Expressed in *E. coli*

Purity: >95% as determined by SDS-PAGE.

Storage buffer: Liquid. In PBS Buffer.

REFERENCES

1. Corpas FJ, Barroso JB, del Río LA. Peroxisomes as a source of reactive oxygen species and nitric oxide signal molecules in plant cells. *Trends Plant Sci.* 2001; 6 (4): 145–150.
2. Corpas FJ et al. The expression of different superoxide dismutase forms is cell-type dependent in olive (*Olea europaea* L.) leaves. *Plant Cell Physio.* 2006; 47 (7): 984–994.
3. Li, et al., Y. Dilated cardiomyopathy and neonatal lethality in mutant mice lacking manganese superoxide dismutase. *Nat. Genet.* 1995; 11: 376–381.

FOR RESEARCH USE ONLY



Structure of the monomeric unit of human superoxide dismutase 2.

GENE INFORMATION

Gene Name: [SOD3](#)

Summary: This gene encodes a member of the superoxide dismutase (SOD) protein family. SODs are antioxidant enzymes that catalyze the dismutation of two superoxide radicals into hydrogen peroxide and oxygen. The product of this gene is thought to protect the brain, lungs, and other tissues from oxidative stress. The protein is secreted into the extracellular space and forms a glycosylated homotetramer that is anchored to the extracellular matrix (ECM) and cell surfaces through an interaction with heparan sulfate proteoglycan and collagen. A fraction of the protein is cleaved near the C-terminus before secretion to generate circulating tetramers that do not interact with the ECM.

mRNA Refseq: [NM_003102.2](#)

Protein Refseq: [NP_003093.2](#)

MIM: [185490](#)

GeneID: [6649](#)

Uniprot ID: [P08294](#)

Chromosome Location: 4p15.3-p15.1

Function: antioxidant activity, copper ion binding, heparin binding, metal ion binding, oxidoreductase activity, protein binding, superoxide dismutase activity, zinc ion binding.

Process: oxidation reduction, response to hypoxia, superoxide metabolic process.

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