

## Recombinant Human SOD1 protein

Cat. No. SOD1-04H Lot. No. (See product label)

### SPECIFICATION

<b>Product Overview</b>	Recombinant Human SOD1 protein was expressed in Escherichia coli.
<b>Species</b>	Human
<b>Source</b>	E.coli
<b>ProteinLength</b>	153
<b>Description</b>	Superoxide dismutase catalyzes the reaction between superoxide anions and hydrogen to yield molecular oxygen and hydrogen peroxide. Cu/Zn superoxide dismutase also named as SOD1, is an enzyme encoded by the SOD1 gene in humans, located on chromosome 21. The SOD1 binds Cu and Zn ions and is one of three SODs responsible for destroying free superoxide radicals in the body. It has been shown to interact with CCS and Bcl-2. The malfunction of SOD1 may increase the risk of illnesses like age-related muscle mass loss (sarcopenia), early development of cataracts, macular degeneration, thymic involution, hepatocellular carcinoma, shortened lifespan, keratoconus and amyotrophic lateral sclerosis.
<b>Form</b>	Lyophilized from a 0.2µm filtered concentrated solution in PBS, pH 7.4.
<b>Bio-activity</b>	Fully biologically active when compared to standard. The potency per mg was determined by Pyrogalllic Acid method and was found to be more than $1.0 \times 10^4$ IU/mg.
<b>Molecular Mass</b>	Approximately 31.6 kDa, a homodimer, non-glycosylated polypeptide chain containing

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2 × 153 amino acids.

**AA Sequence**

ATKAVCVLKGDPVQGIINFEQKESNGPVKVVWGSIKGLTEGLHGFHVHEFGDNTAG  
 CTSAGPHFNPLSRKHGGPKDEERHVVDLGNVTADKDG VADVSIEDSVISLSGDHCII  
 GRTL VVHEKADDL GKGGNEESTKTGNAGSRLACGVIGIAQ

**Endotoxin**

Less than 1 EU/μg of rHuCu/Zn SOD as determined by LAL method.

**Purity**

>95% by SDS-PAGE and HPLC analysis.

**Storage**

Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 centigrade as supplied. 1 month, 2 to 8 centigrade under sterile conditions after reconstitution. 3 months, -20 to -70 centigrade under sterile conditions after reconstitution.

**Reconstitution**

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤-20 centigrade. Further dilutions should be made in appropriate buffered solutions.

## GENE INFORMATION

**Gene Name**

SOD1

**Official Symbol**

SOD1

**Synonyms**

SOD1; superoxide dismutase 1, soluble; ALS, ALS1, amyotrophic lateral sclerosis 1 (adult); superoxide dismutase [Cu-Zn]; IPOA; SOD, soluble; indophenoxidase A; Cu/Zn superoxide dismutase; superoxide dismutase, cystolic; ALS; SOD; ALS1; hSod1; homodimer;

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**Gene ID** 6647

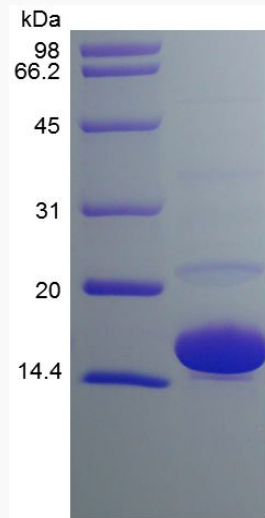
**mRNA Refseq** NM\_000454

**Protein Refseq** NP\_000445

**MIM** 147450

**UniProt ID** P00441

**SDS-PAGE of SOD1-04H**



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